FIG.1

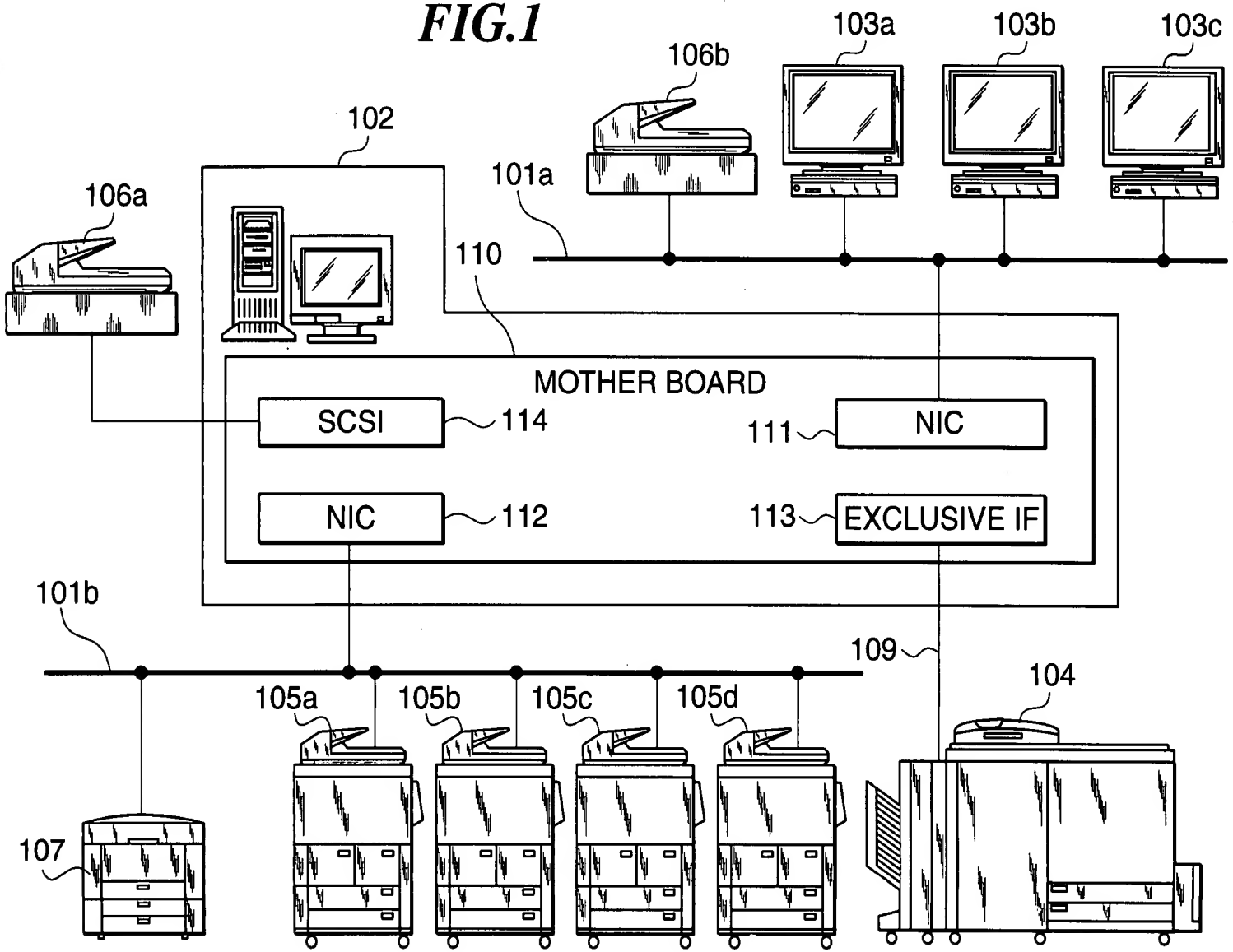

103a
103b
103c
106b
102
101a
106a
110
MOTHER BOARD
SCSI
114
111
NIC
NIC
112
113
EXCLUSIVE IF
101b
109
104
105a
105b
105c
105d
107

FIG.2

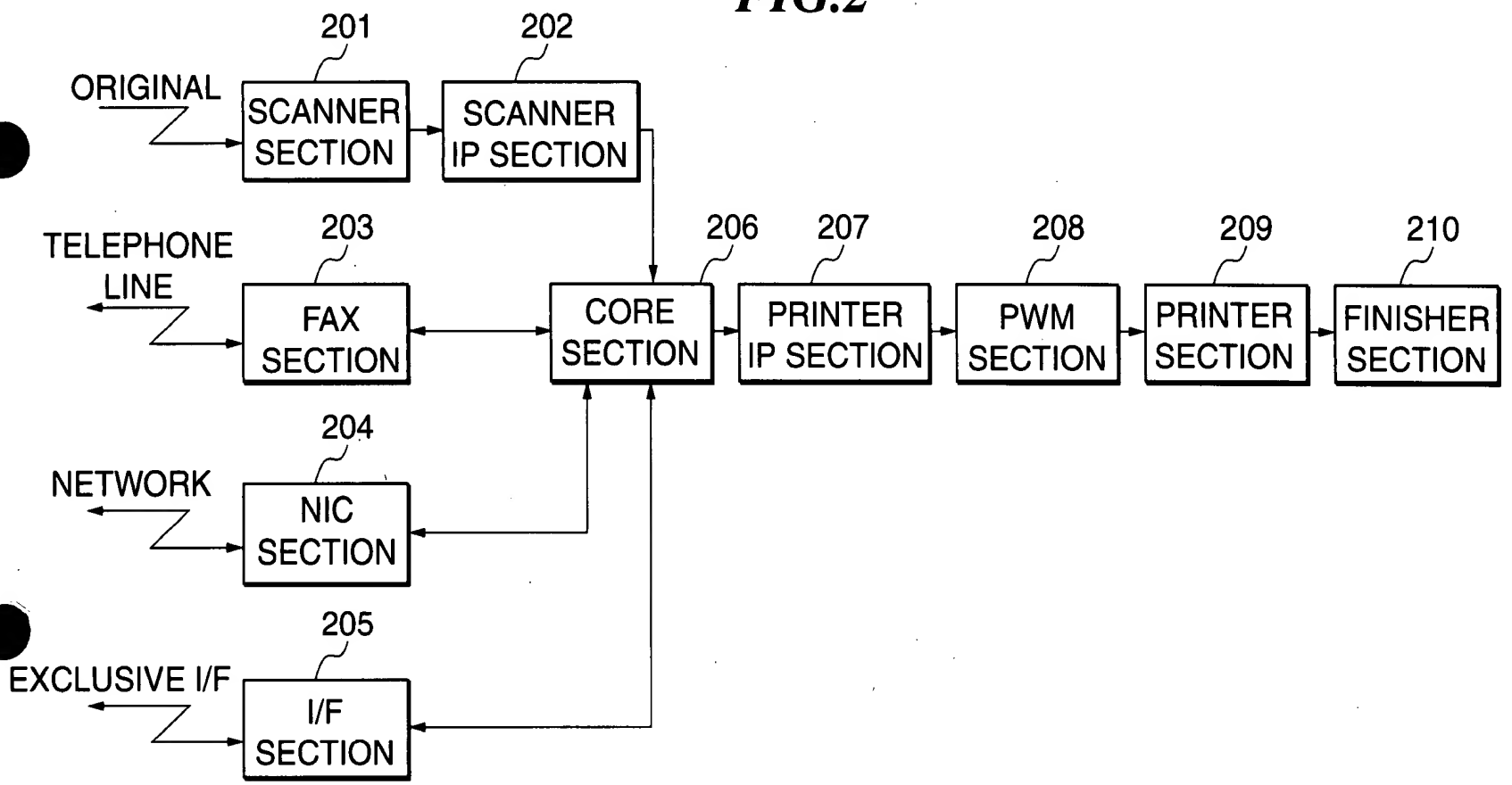

201
202
ORIGINAL
SCANNER SECTION
SCANNER IP SECTION
203
206
207
208
209
210
TELEPHONE LINE
FAX SECTION
CORE SECTION
PRINTER IP SECTION
PWM SECTION
PRINTER SECTION
FINISHER SECTION
204
NETWORK
NIC SECTION
205
EXCLUSIVE I/F
I/F SECTION

FIG.3

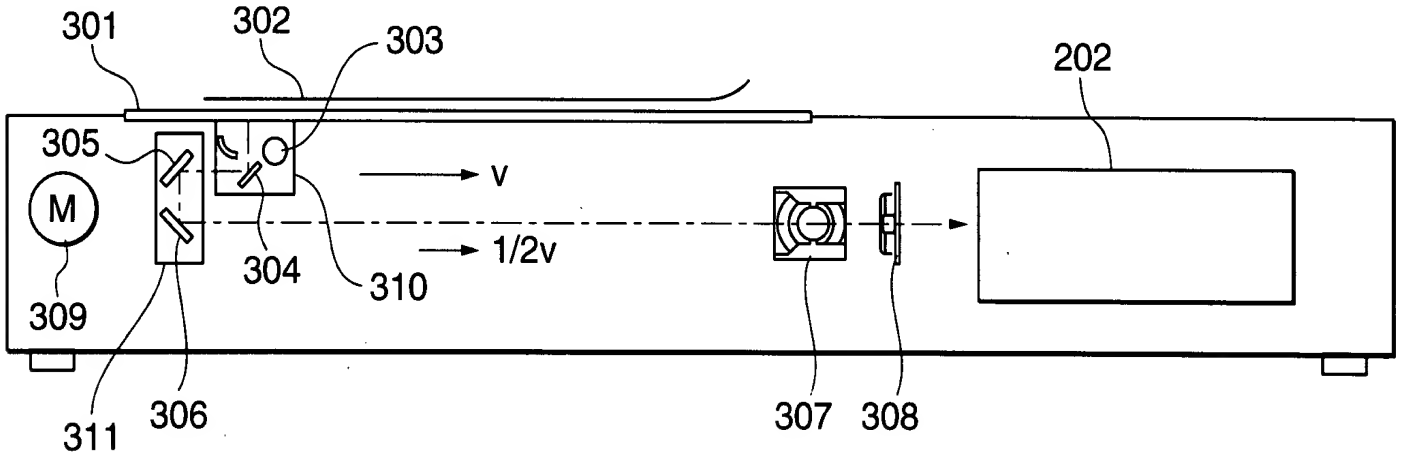


FIG.4A

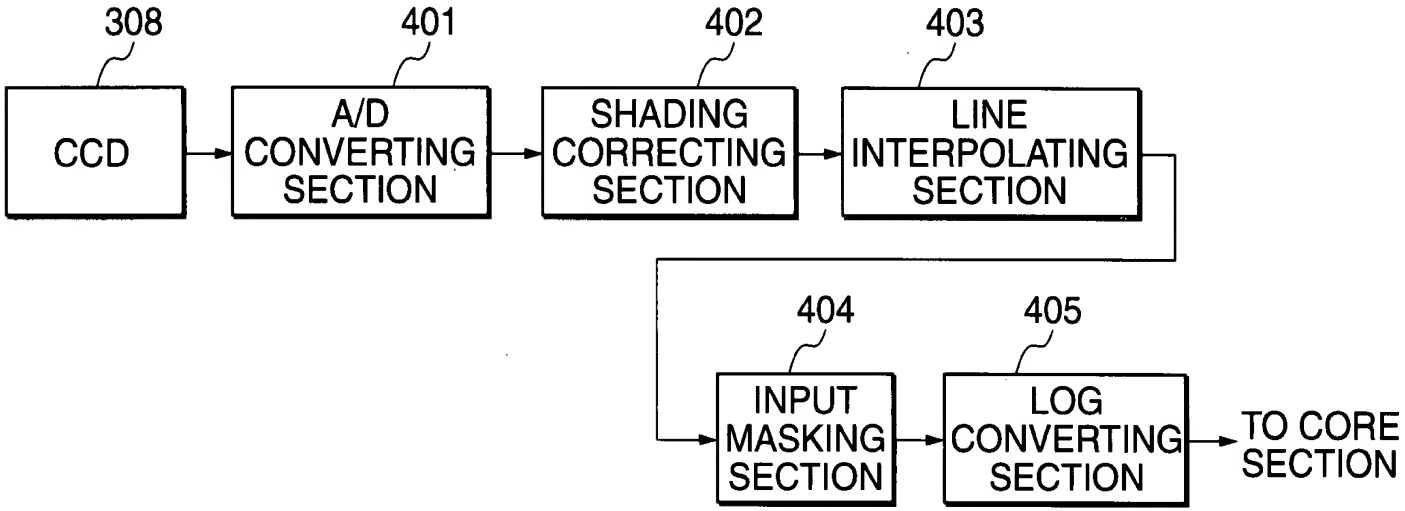

308
401
402
403
CCD
A/D CONVERTING SECTION
SHADING CORRECTING SECTION
LINE INTERPOLATING SECTION
404
405
INPUT MASKING SECTION
LOG CONVERTING SECTION
TO CORE SECTION

FIG.4B

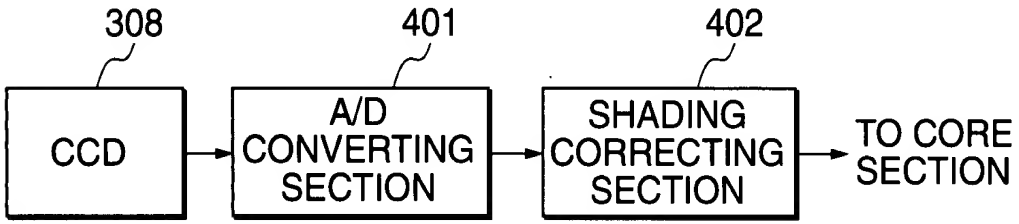

308
401
402
CCD
A/D CONVERTING SECTION
SHADING CORRECTING SECTION
TO CORE SECTION

FIG.5

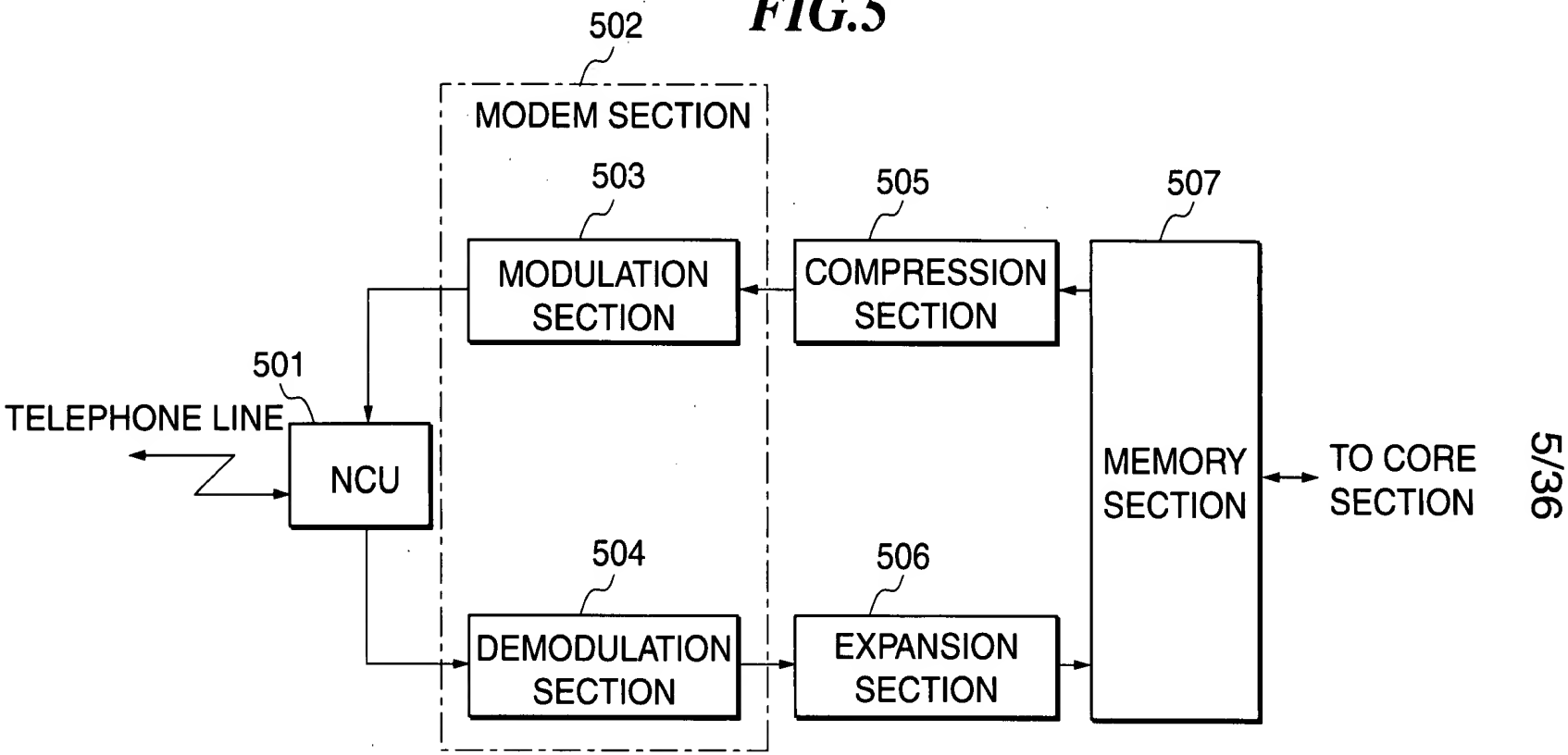

502
MODEM SECTION
503
MODULATION SECTION
505
COMPRESSION SECTION
507
501
TELEPHONE LINE
NCU
MEMORY SECTION
TO CORE SECTION
504
DEMODULATION SECTION
506
EXPANSION SECTION

FIG.6

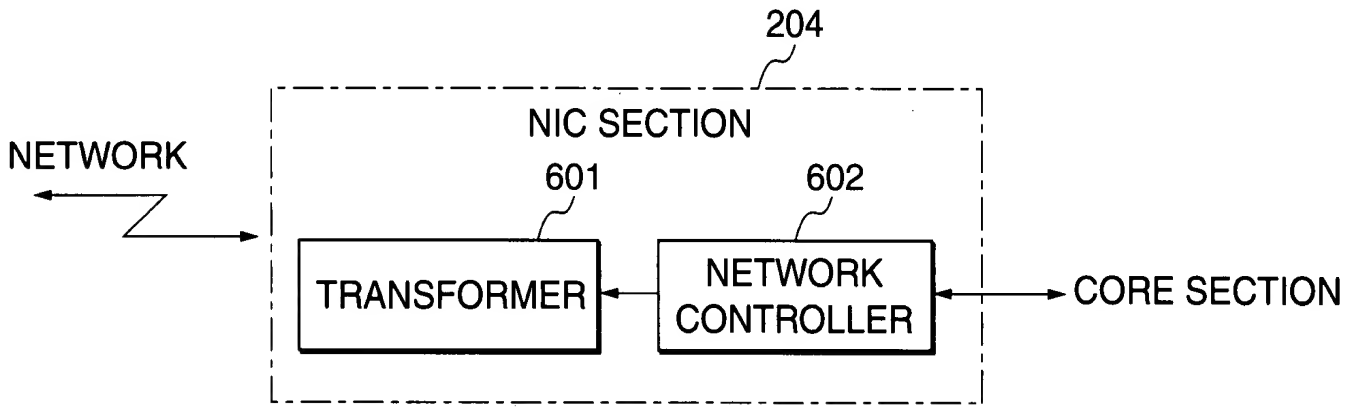

204
NIC SECTION
NETWORK
601
602
TRANSFORMER
NETWORK CONTROLLER
CORE SECTION

FIG.7

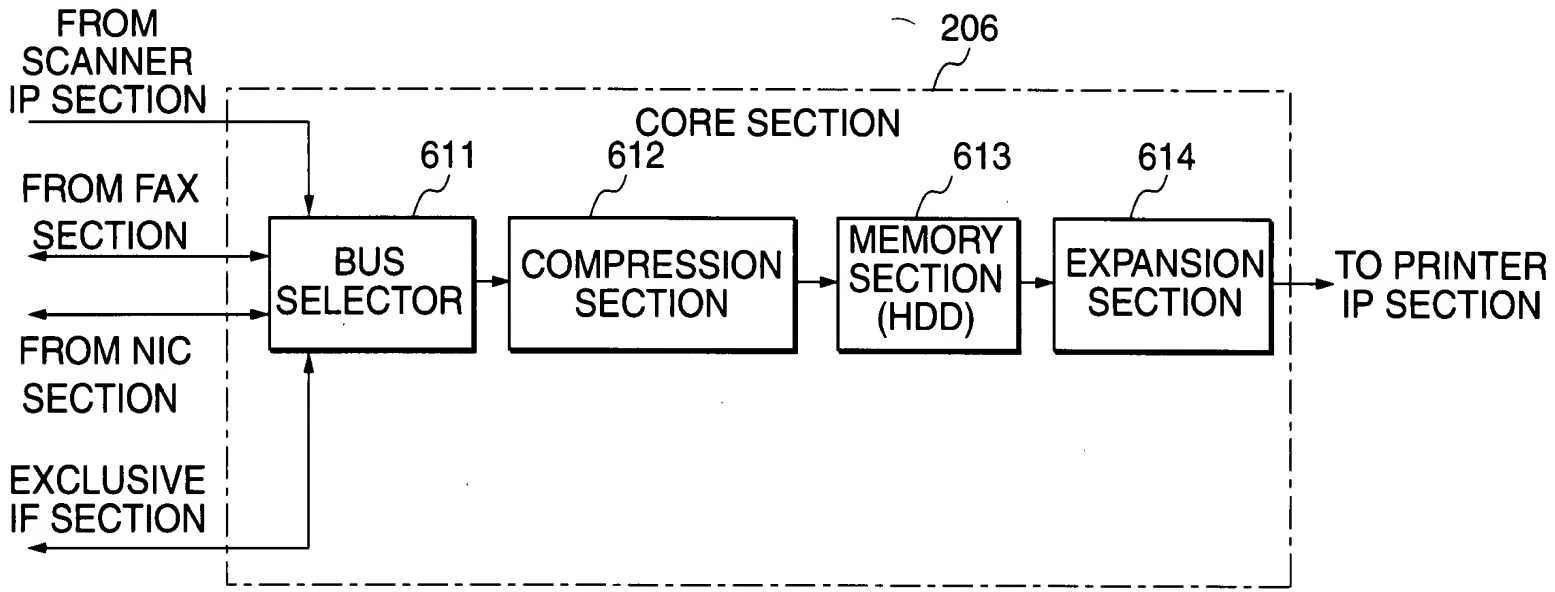

FROM SCANNER IP SECTION
FROM FAX SECTION
FROM NIC SECTION
EXCLUSIVE IF SECTION
206
CORE SECTION
611
612
613
614
BUS SELECTOR
COMPRESSION SECTION
MEMORY SECTION (HDD)
EXPANSION SECTION
TO PRINTER IP SECTION

FIG.8A

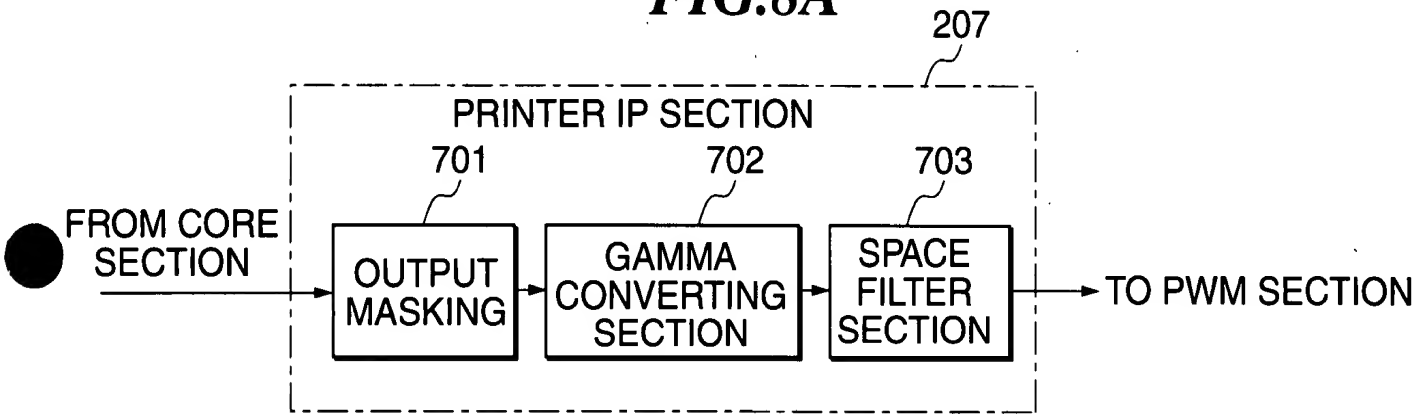

207
PRINTER IP SECTION
701
702
703
FROM CORE SECTION
OUTPUT MASKING
GAMMA CONVERTING SECTION
SPACE FILTER SECTION
TO PWM SECTION

FIG.8B

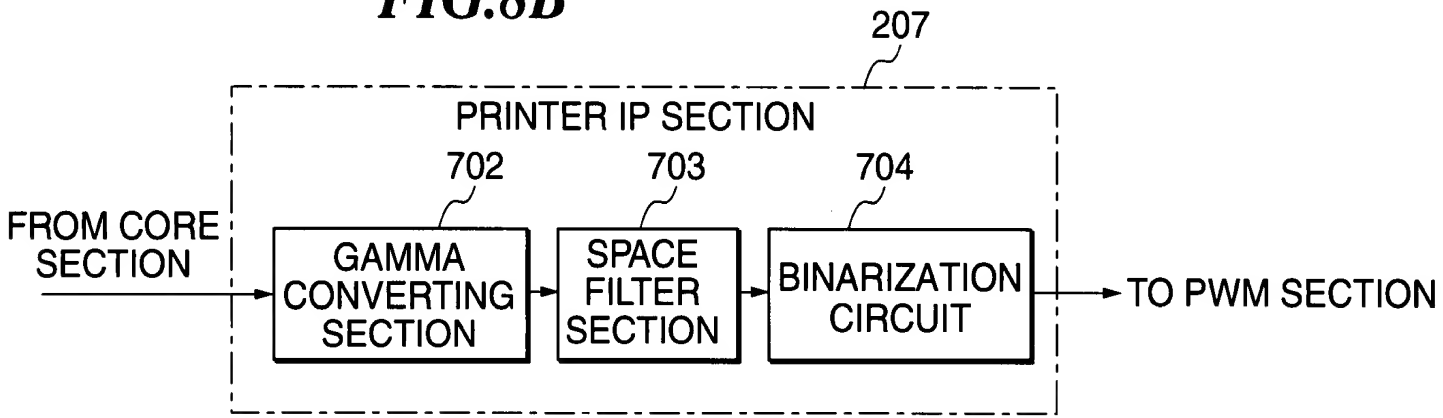

207
PRINTER IP SECTION
702
703
704
FROM CORE SECTION
GAMMA CONVERTING SECTION
SPACE FILTER SECTION
BINARIZATION CIRCUIT
TO PWM SECTION

FIG.9

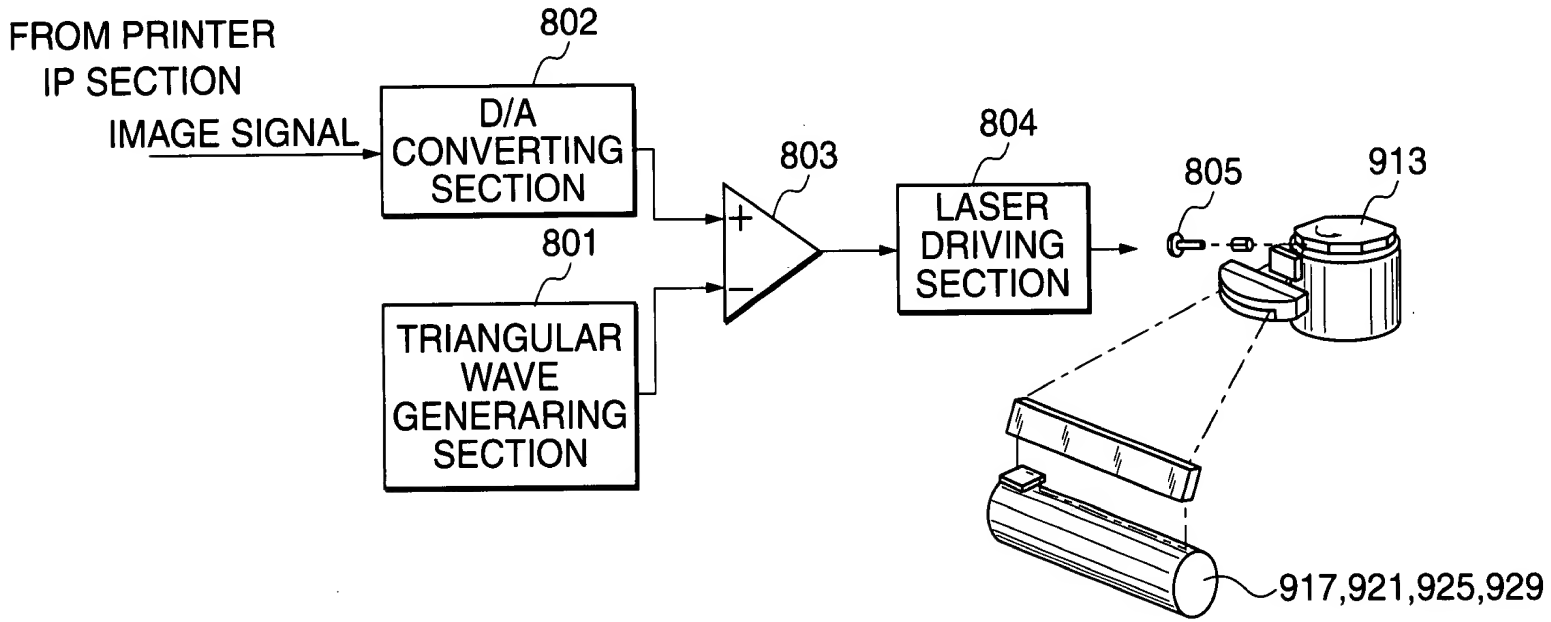

FROM PRINTER IP SECTION
IMAGE SIGNAL
802
D/A CONVERTING SECTION
801
TRIANGULAR WAVE GENERARING SECTION
803
804
LASER DRIVING SECTION
805
913
917,921,925,929

FIG.10

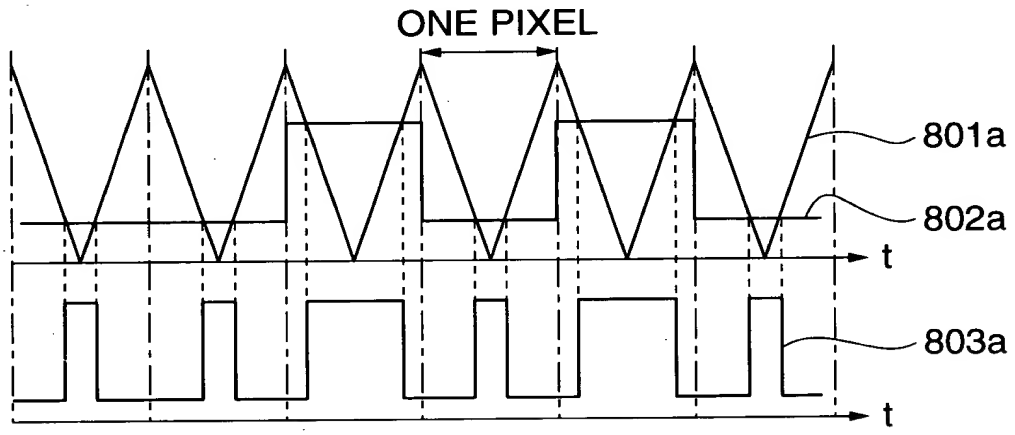


FIG.11

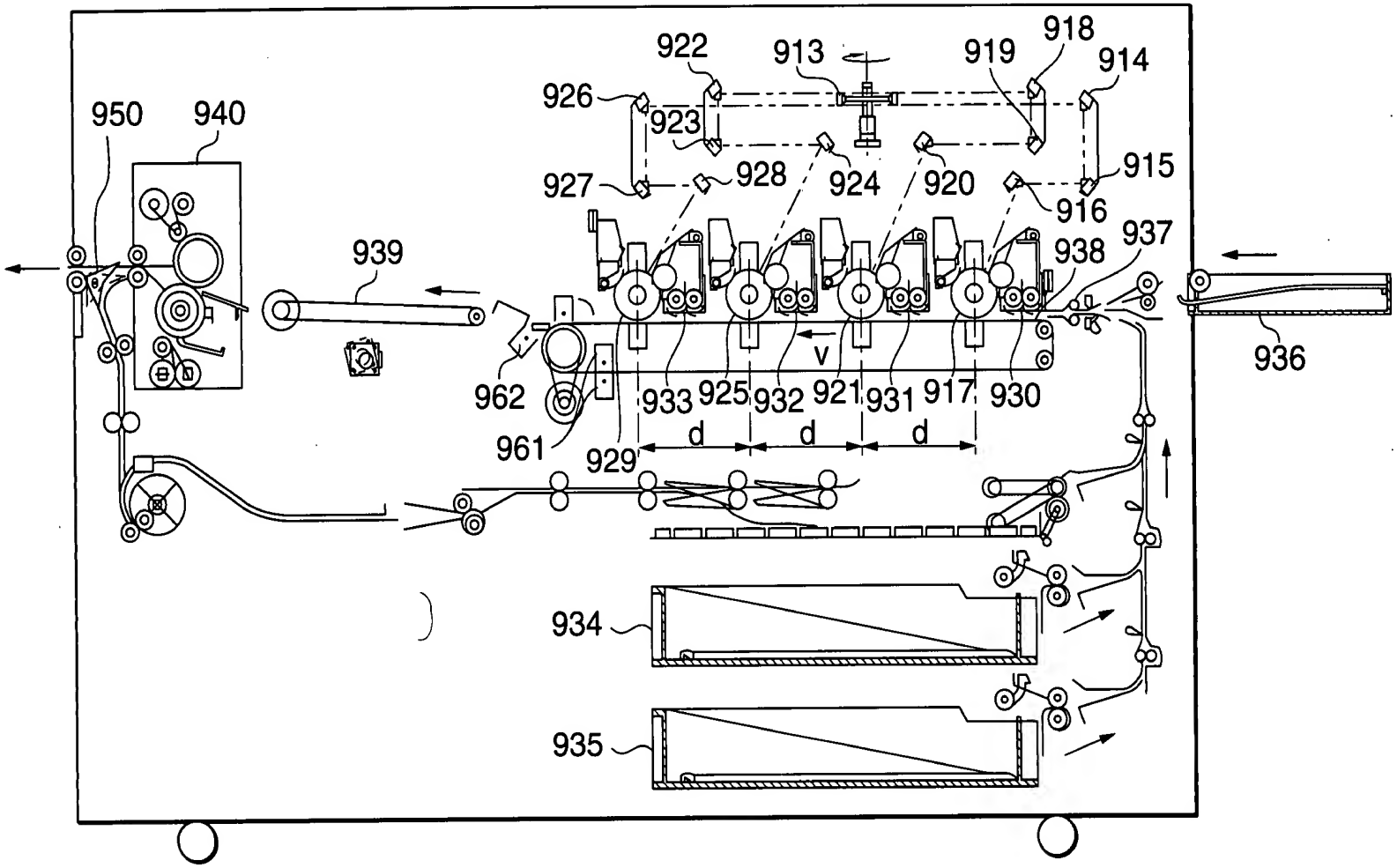

950
940
939
962
961
922
913
919
918
914
926
923
927
928
924
920
915
916
938
937
936
933
925
932
921
931
917
930
929
d
d
d
v
934
935

FIG.12

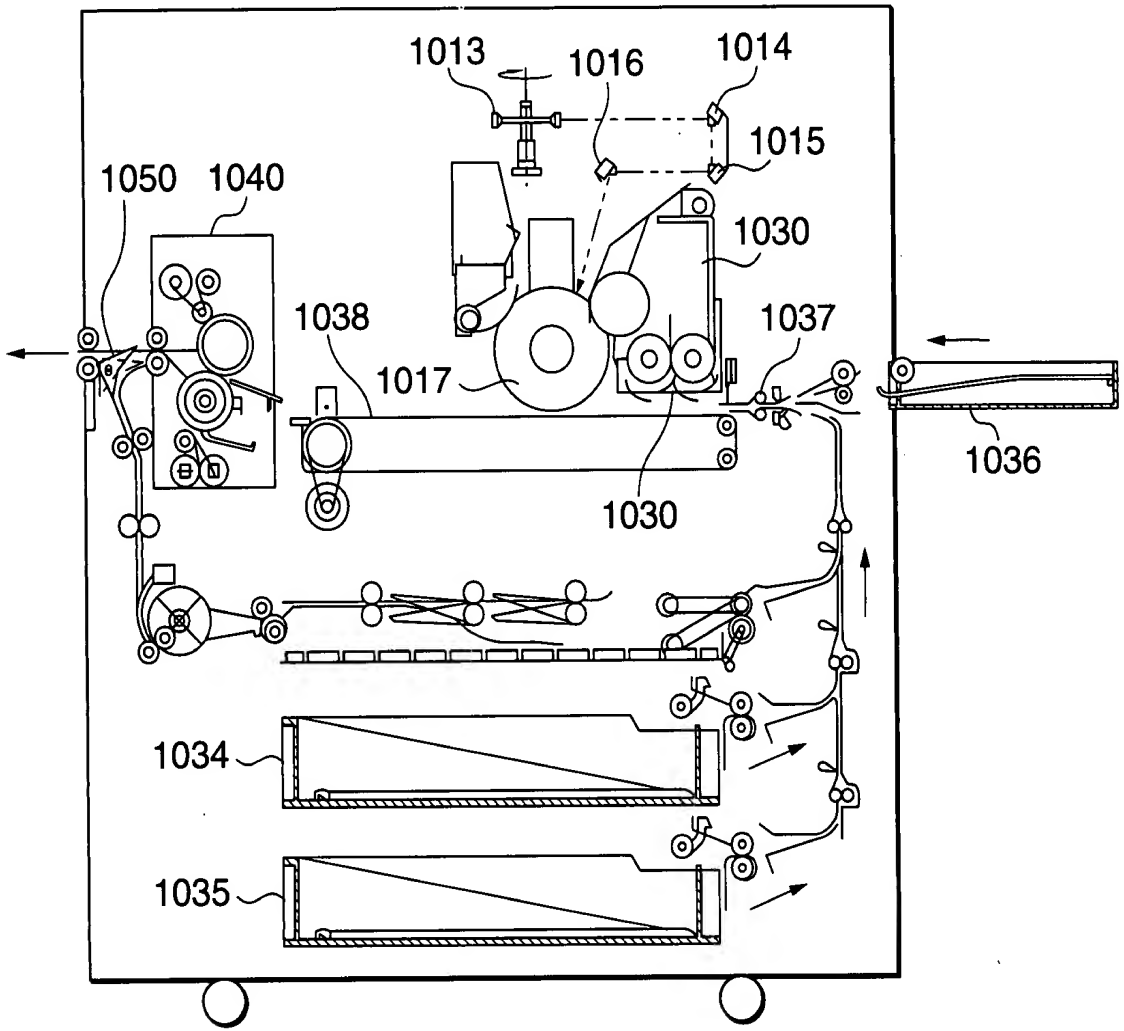

1013
1016
1014
1015
1050
1040
1030
1038
1037
1017
1036
1030
1034
1035

FIG.13

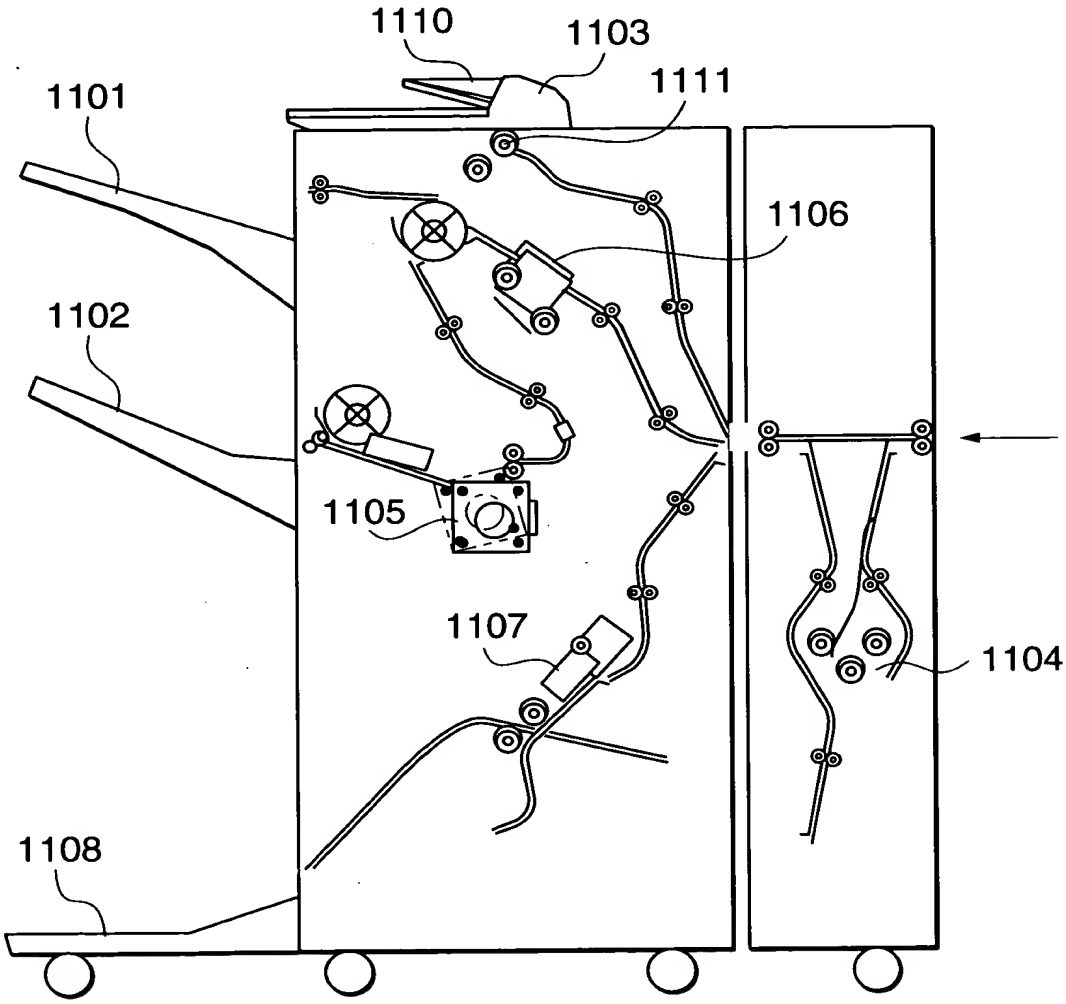


FIG.14

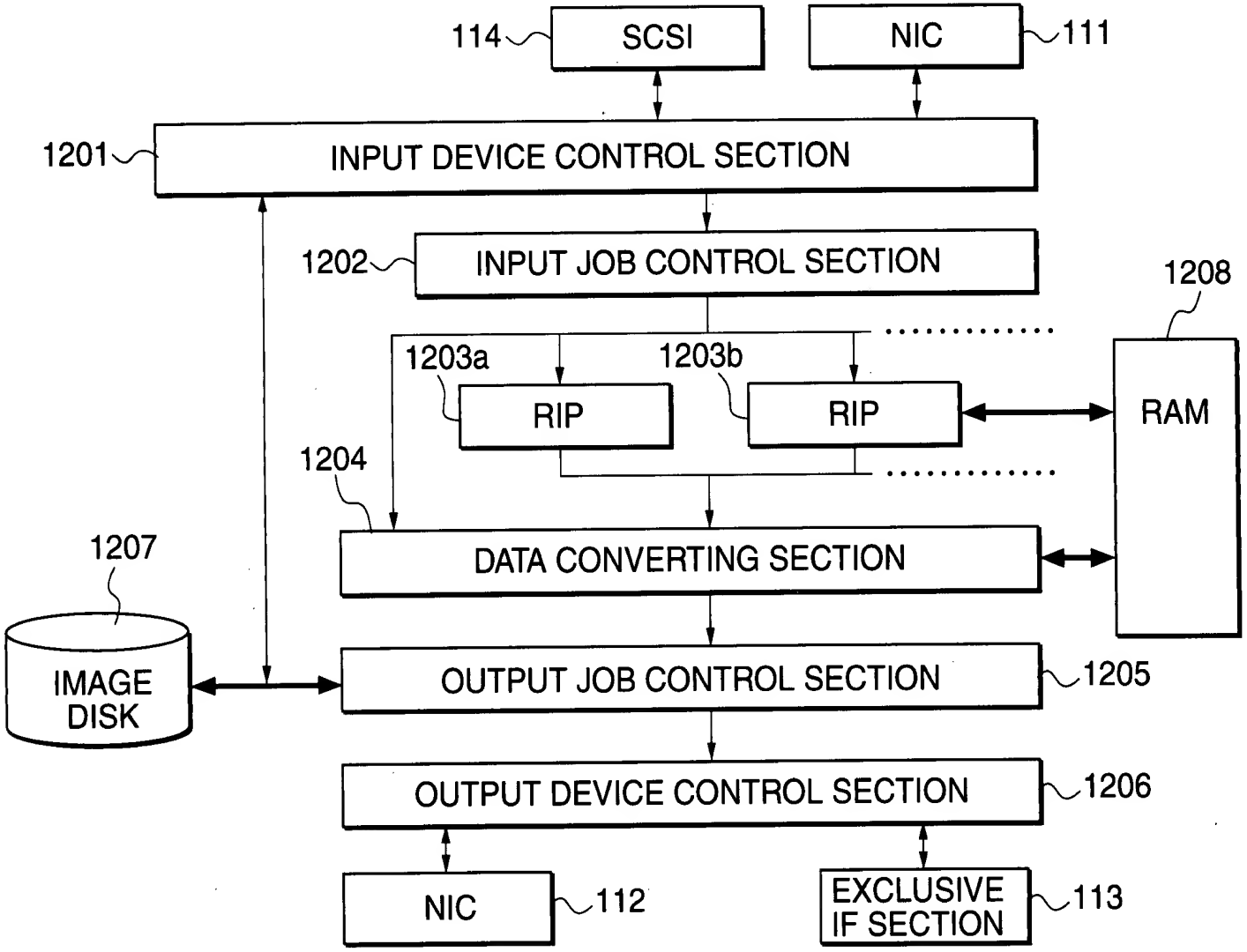

114
SCSI
NIC
111
1201
INPUT DEVICE CONTROL SECTION
1202
INPUT JOB CONTROL SECTION
1208
1203a
1203b
RIP
RIP
RAM
1204
1207
DATA CONVERTING SECTION
IMAGE DISK
OUTPUT JOB CONTROL SECTION
1205
OUTPUT DEVICE CONTROL SECTION
1206
NIC
112
EXCLUSIVE IF SECTION
113

FIG.15A

```
[DESCRIPTION OF R1301]
char_color={0.0,0.0,0.0,1.0};          ←L1311
string1="IC";                          ←L1312
put_char(0.0,0.0,0.3,0.1,string1);     ←L1313
```

FIG.15B

```
[DESCRIPTION OF R1302]
line_color={1.0,0.0,0.0,0.0};          ←L1321
put_line(0.9,0.0,0.9,1.0,0.1)          ←L1322
```

FIG.15C

```
[DESCRIPTION OF R1303]
image1={CMYK,8,5,5,C0,M0,Y0,K0,        ←L1331
                C1,M1,Y1,K1
                  ⋮
                C24,M24,Y24,K24}
put_image(0.0,0.5,0.5,0.5,image1)      ←L1332
```

FIG.16

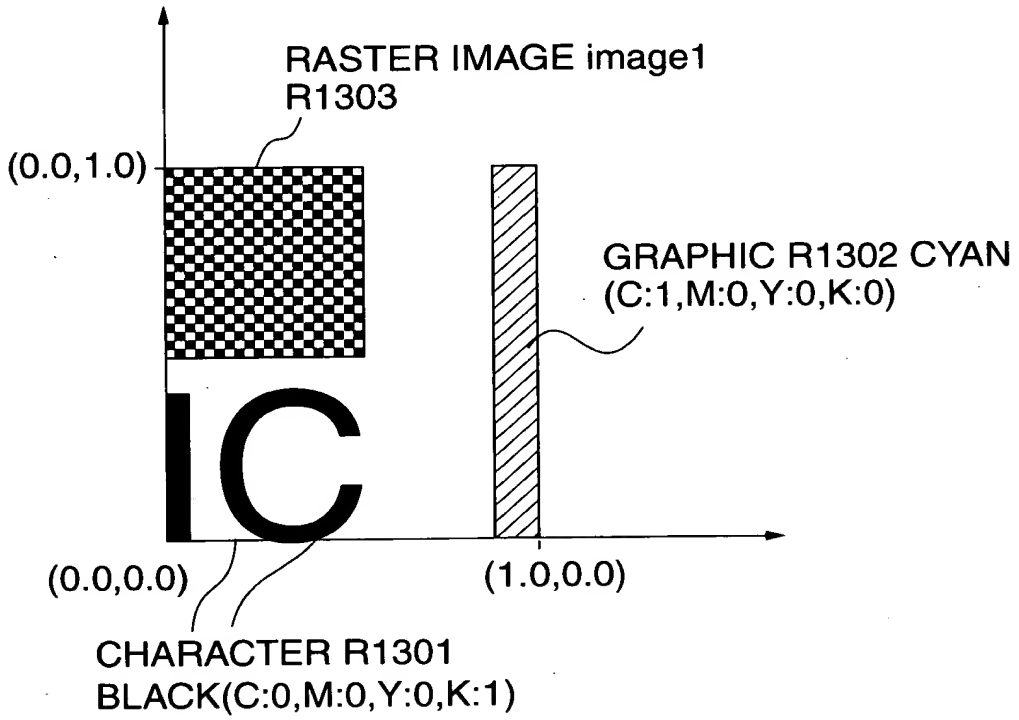

RASTER IMAGE image1
R1303
(0.0,1.0)
GRAPHIC R1302 CYAN
(C:1,M:0,Y:0,K:0)
IC
(0.0,0.0)
(1.0,0.0)
CHARACTER R1301
BLACK(C:0,M:0,Y:0,K:1)

FIG.17

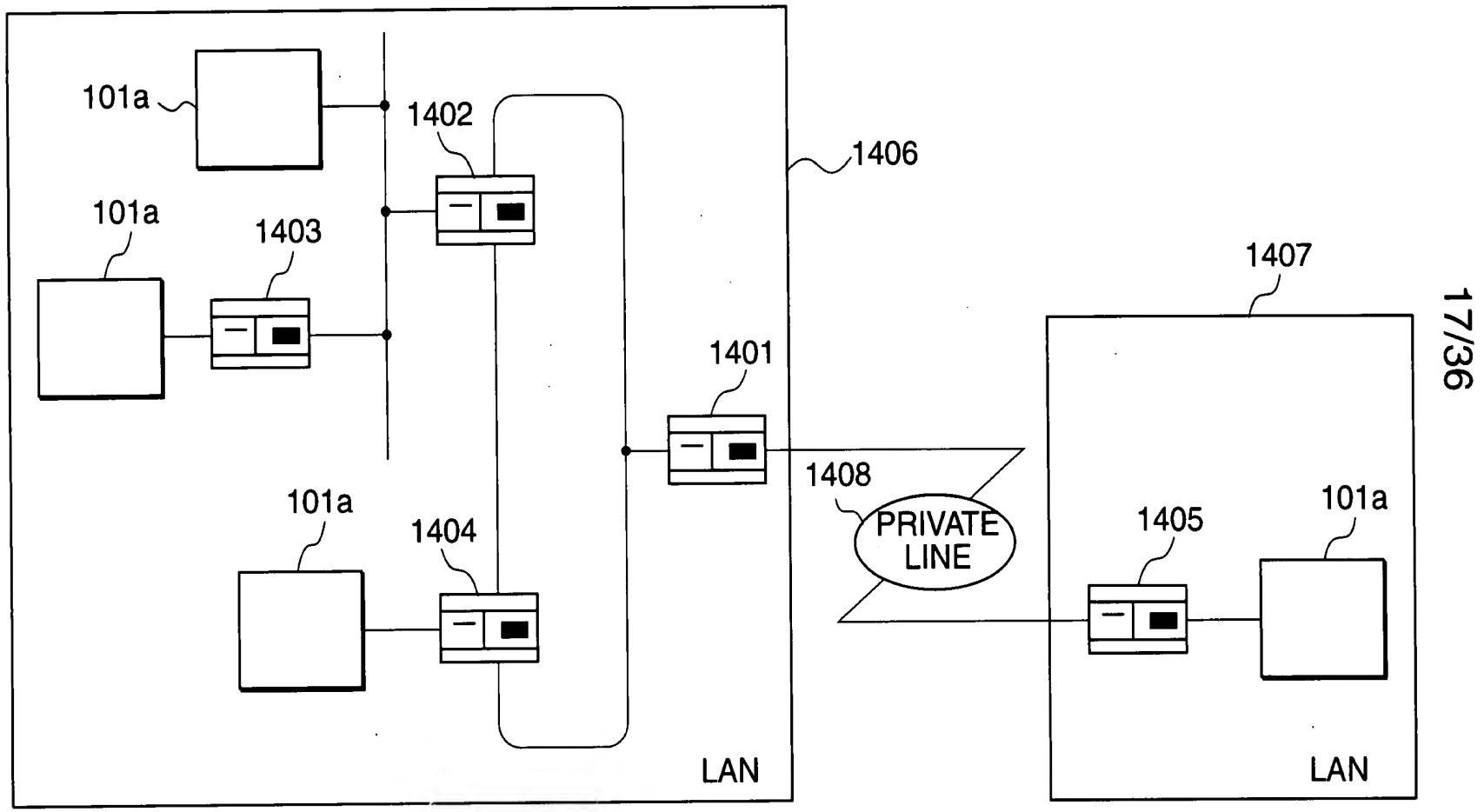

101a
1402
1406
101a
1403
1407
1401
1408
PRIVATE LINE
1405
101a
101a
1404
LAN
LAN

FIG.18

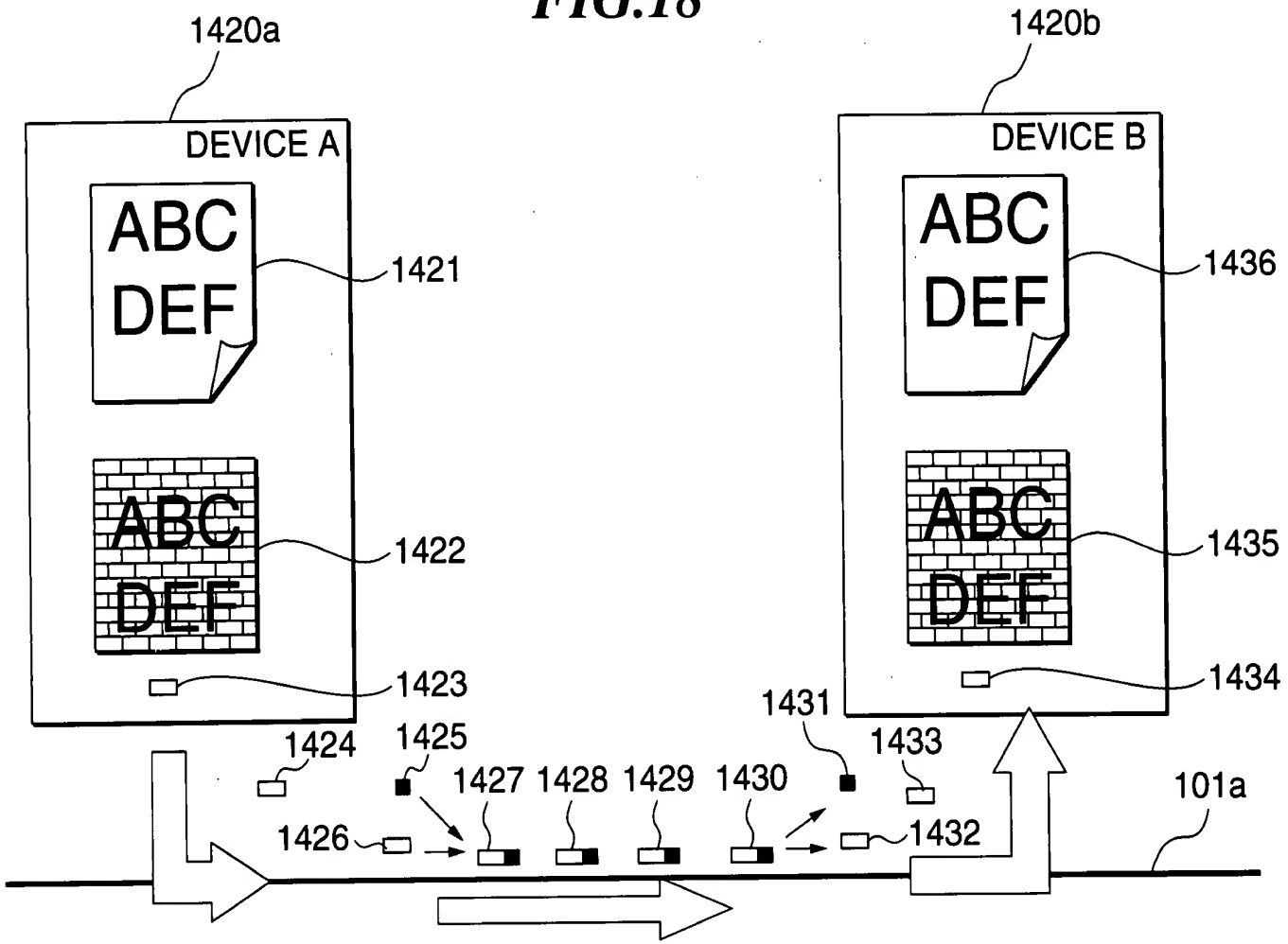

1420a
DEVICE A
ABC
DEF
1421
ABC
DEF
1422
1423
1424
1425
1426
1427
1428
1429
1430
1431
1432
1433
1420b
DEVICE B
ABC
DEF
1436
ABC
DEF
1435
1434
101a

FIG.19

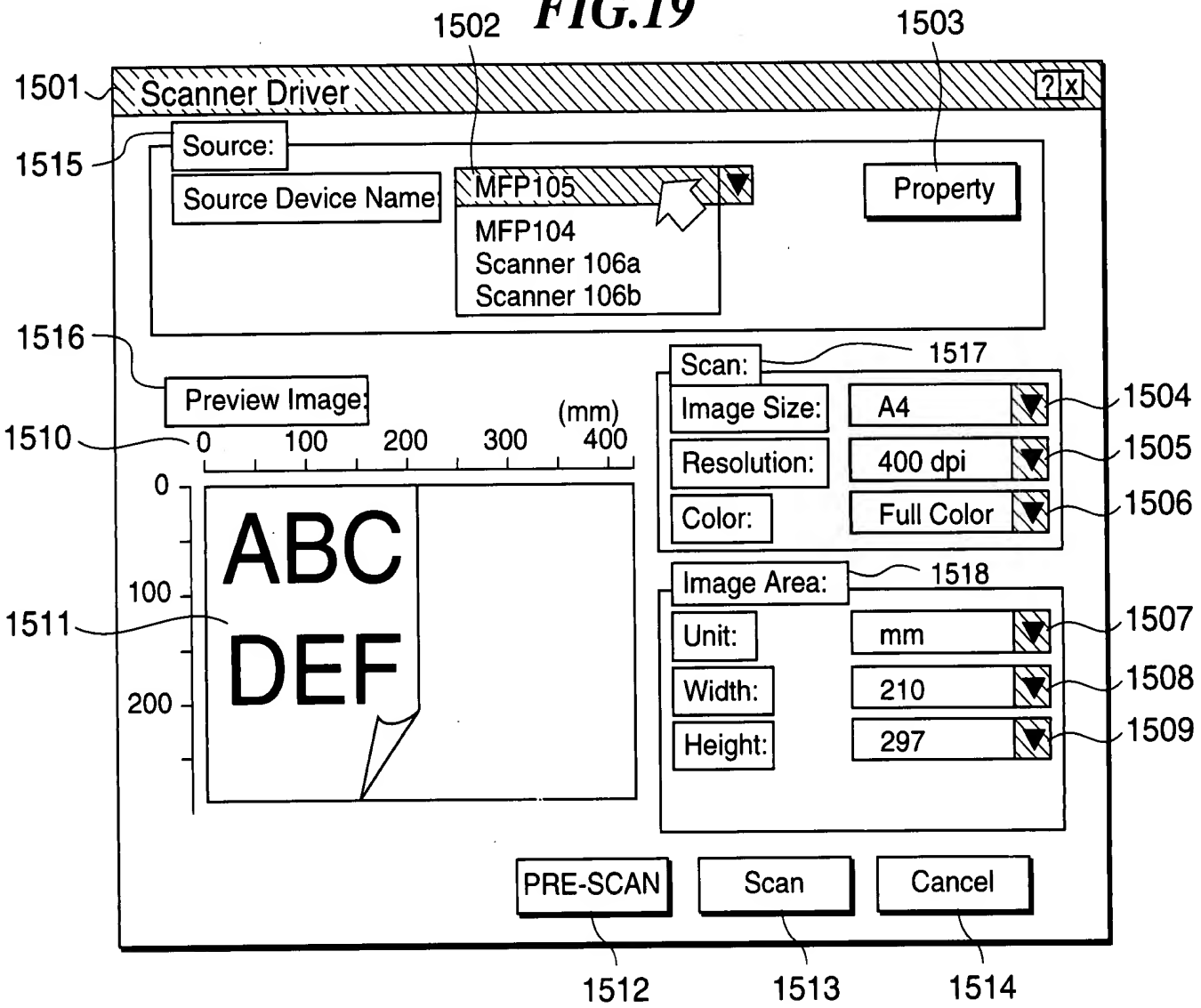

1501
Scanner Driver
1502
1503
1515
Source:
Source Device Name
MFP105
MFP104
Scanner 106a
Scanner 106b
Property
1516
Preview Image:
1510
(mm)
0
100
200
300
400
1511
ABC
DEF
Scan:
1517
Image Size:
A4
1504
Resolution:
400 dpi
1505
Color:
Full Color
1506
Image Area:
1518
Unit:
mm
1507
Width:
210
1508
Height:
297
1509
PRE-SCAN
Scan
Cancel
1512
1513
1514

FIG.20

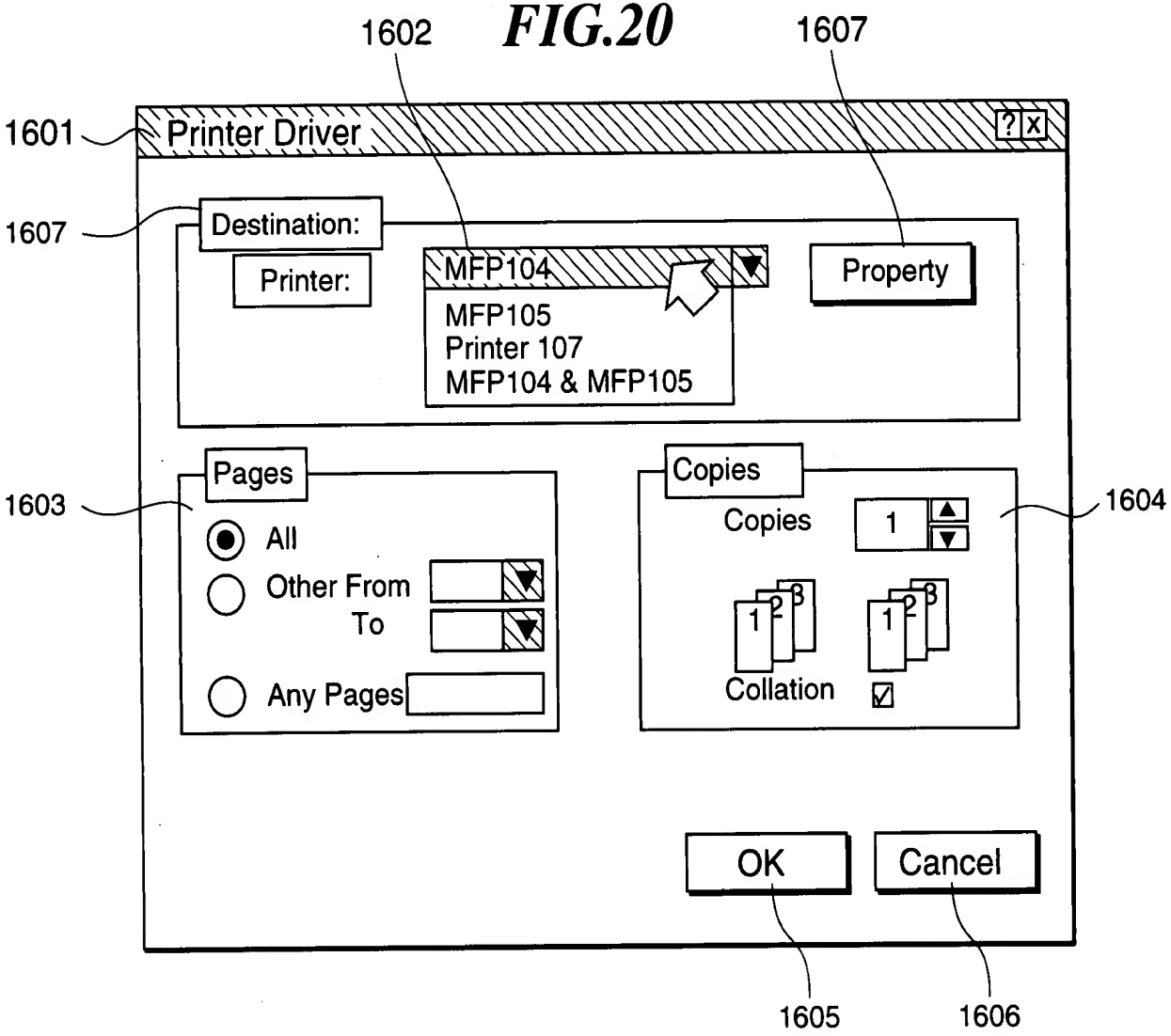

1602
1607
1601
Printer Driver
? X
1607
Destination:
Printer:
MFP104
MFP105
Printer 107
MFP104 & MFP105
Property
Pages
1603
All
Other From
To
Any Pages
Copies
Copies
1
1604
Collation
OK
Cancel
1605
1606

FIG.21

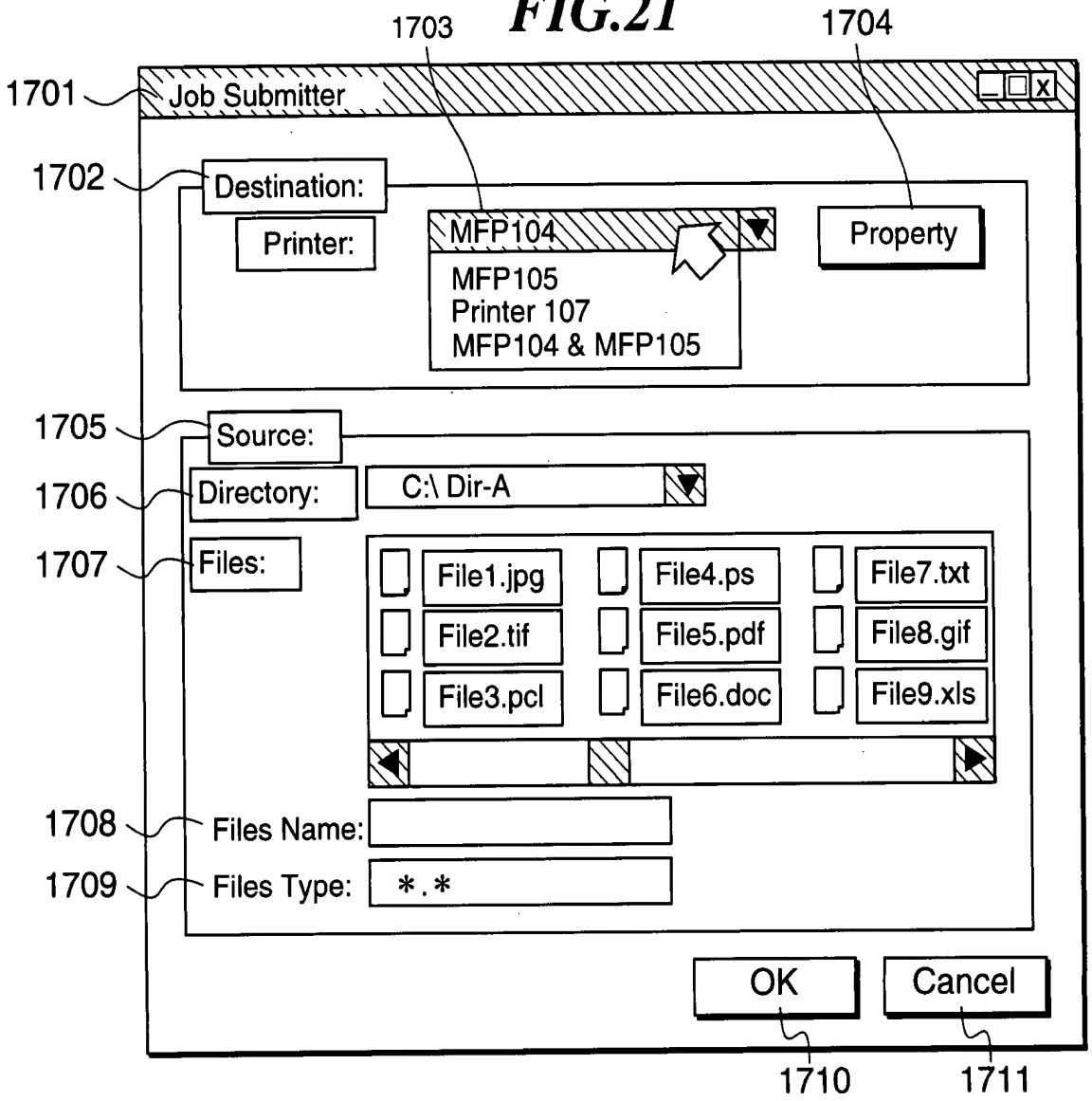

1703
1704
1701
Job Submitter
1702
Destination:
Printer:
MFP104
MFP105
Printer 107
MFP104 & MFP105
Property
1705
Source:
1706
Directory:
C:\ Dir-A
1707
Files:
File1.jpg
File4.ps
File7.txt
File2.tif
File5.pdf
File8.gif
File3.pcl
File6.doc
File9.xls
1708
Files Name:
1709
Files Type:
.
OK
Cancel
1710
1711

FIG.22

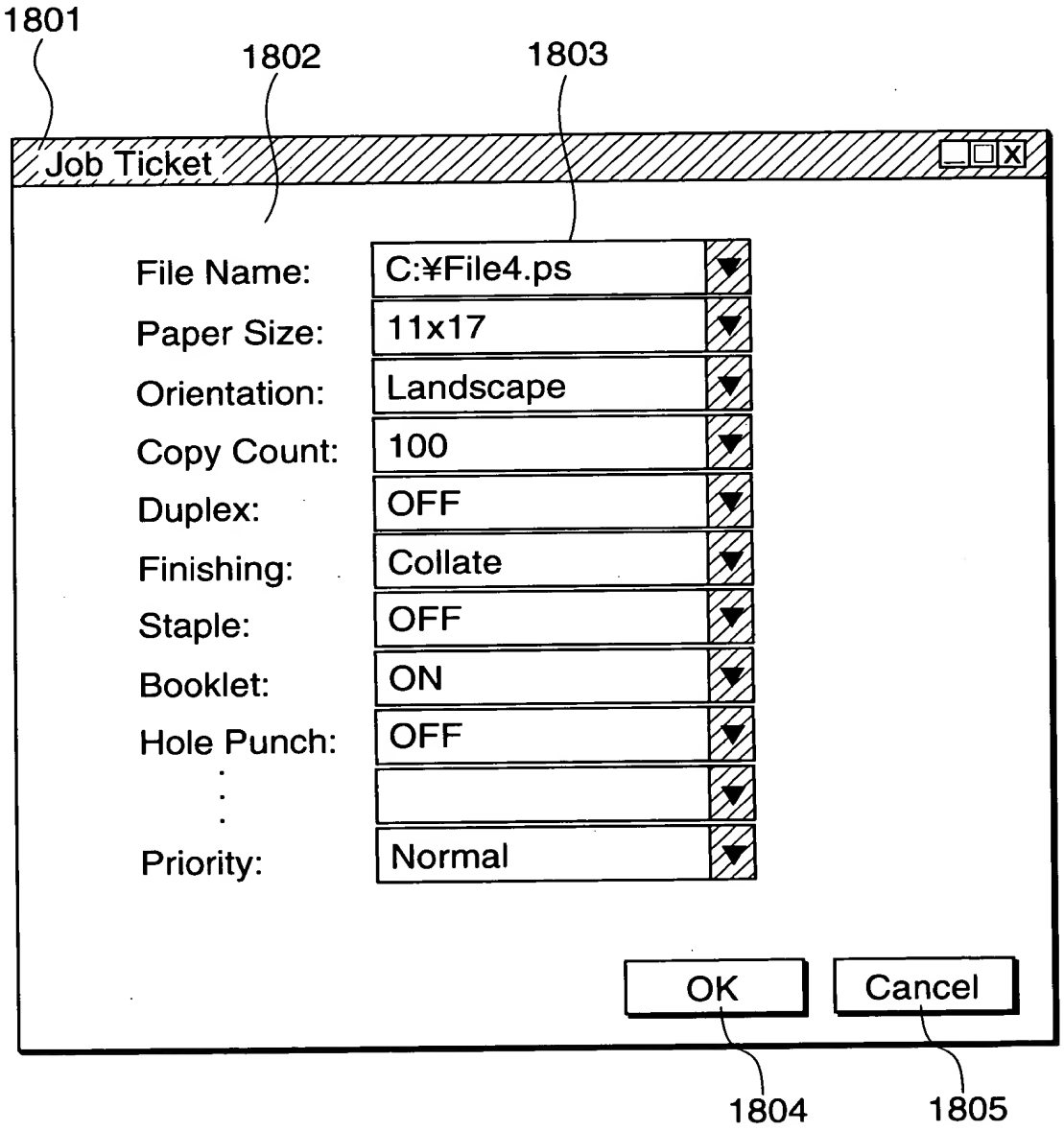

1801
1802
1803
Job Ticket
File Name:
C:¥File4.ps
Paper Size:
11x17
Orientation:
Landscape
Copy Count:
100
Duplex:
OFF
Finishing:
Collate
Staple:
OFF
Booklet:
ON
Hole Punch:
OFF
Priority:
Normal
OK
Cancel
1804
1805

FIG.23

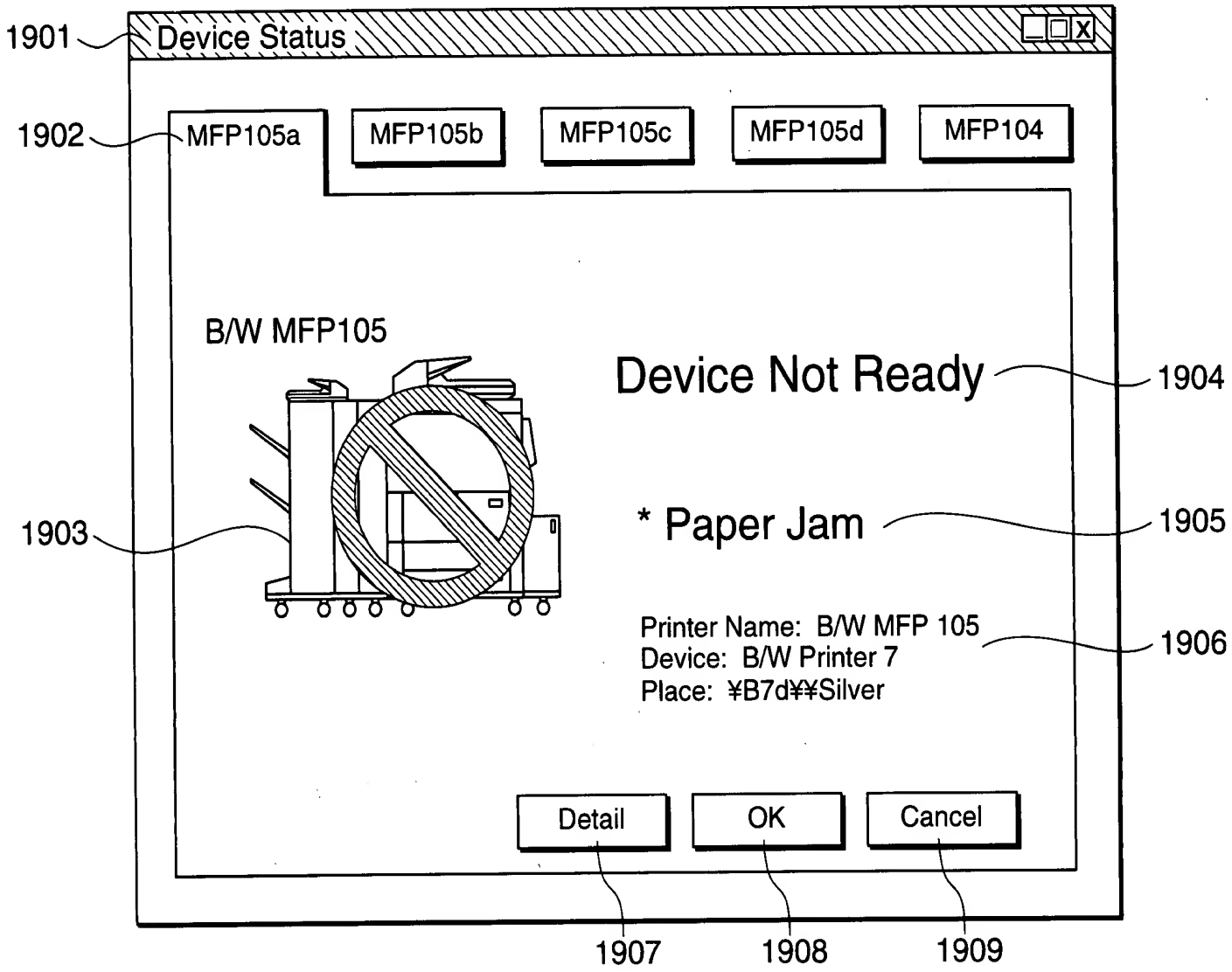
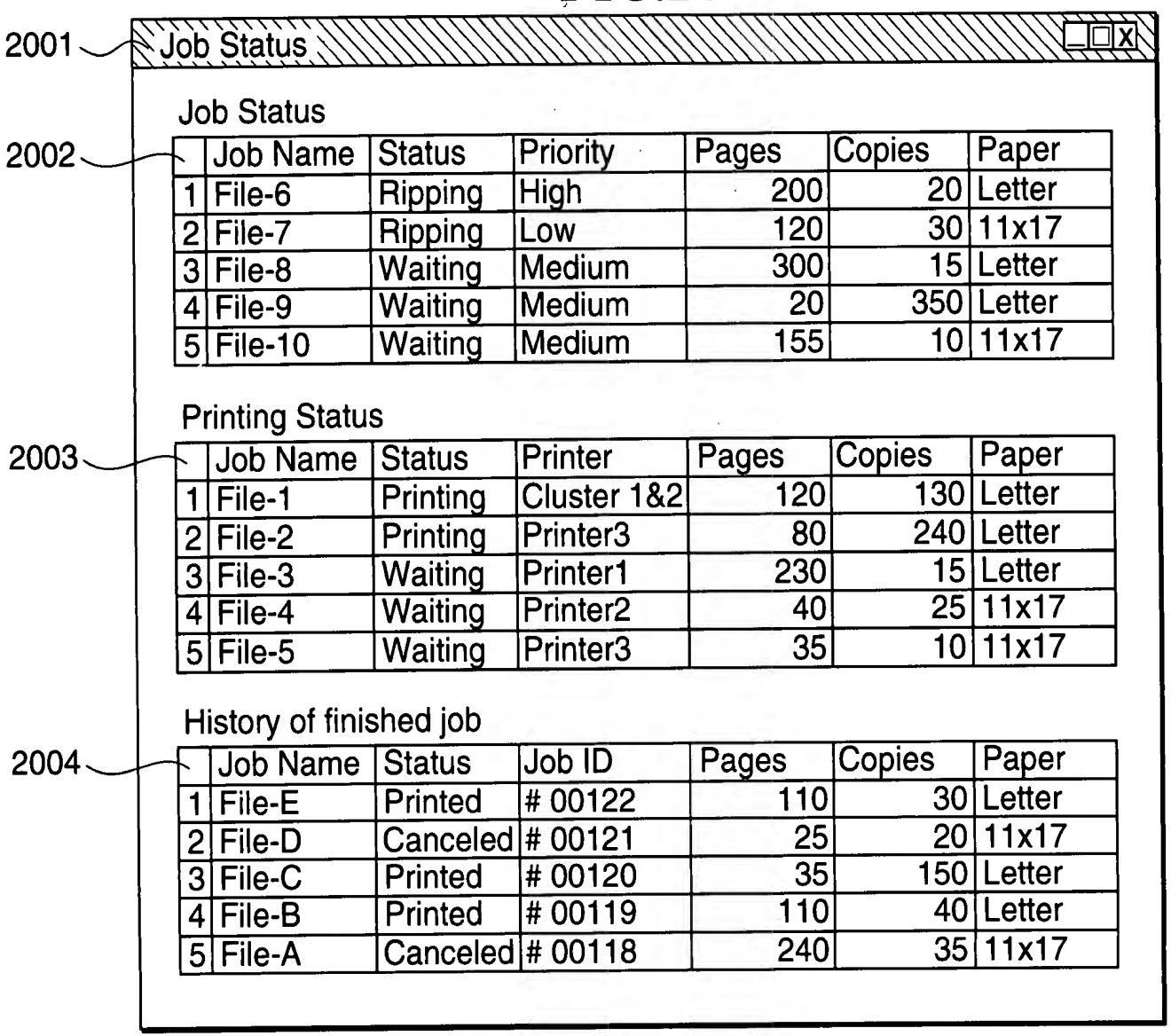

1901
Device Status
1902
MFP105a
MFP105b
MFP105c
MFP105d
MFP104
B/W MFP105
1903
Device Not Ready
1904
* Paper Jam
1905
Printer Name: B/W MFP 105
Device: B/W Printer 7
Place: ¥B7d¥¥Silver
1906
Detail
OK
Cancel
1907
1908
1909

FIG.24



Job Status

	Job Name	Status	Priority	Pages	Copies	Paper
1	File-6	Ripping	High	200	20	Letter
2	File-7	Ripping	Low	120	30	11x17
3	File-8	Waiting	Medium	300	15	Letter
4	File-9	Waiting	Medium	20	350	Letter
5	File-10	Waiting	Medium	155	10	11x17

Printing Status

	Job Name	Status	Printer	Pages	Copies	Paper
1	File-1	Printing	Cluster 1&2	120	130	Letter
2	File-2	Printing	Printer3	80	240	Letter
3	File-3	Waiting	Printer1	230	15	Letter
4	File-4	Waiting	Printer2	40	25	11x17
5	File-5	Waiting	Printer3	35	10	11x17

History of finished job

	Job Name	Status	Job ID	Pages	Copies	Paper
1	File-E	Printed	# 00122	110	30	Letter
2	File-D	Canceled	# 00121	25	20	11x17
3	File-C	Printed	# 00120	35	150	Letter
4	File-B	Printed	# 00119	110	40	Letter
5	File-A	Canceled	# 00118	240	35	11x17

FIG.25

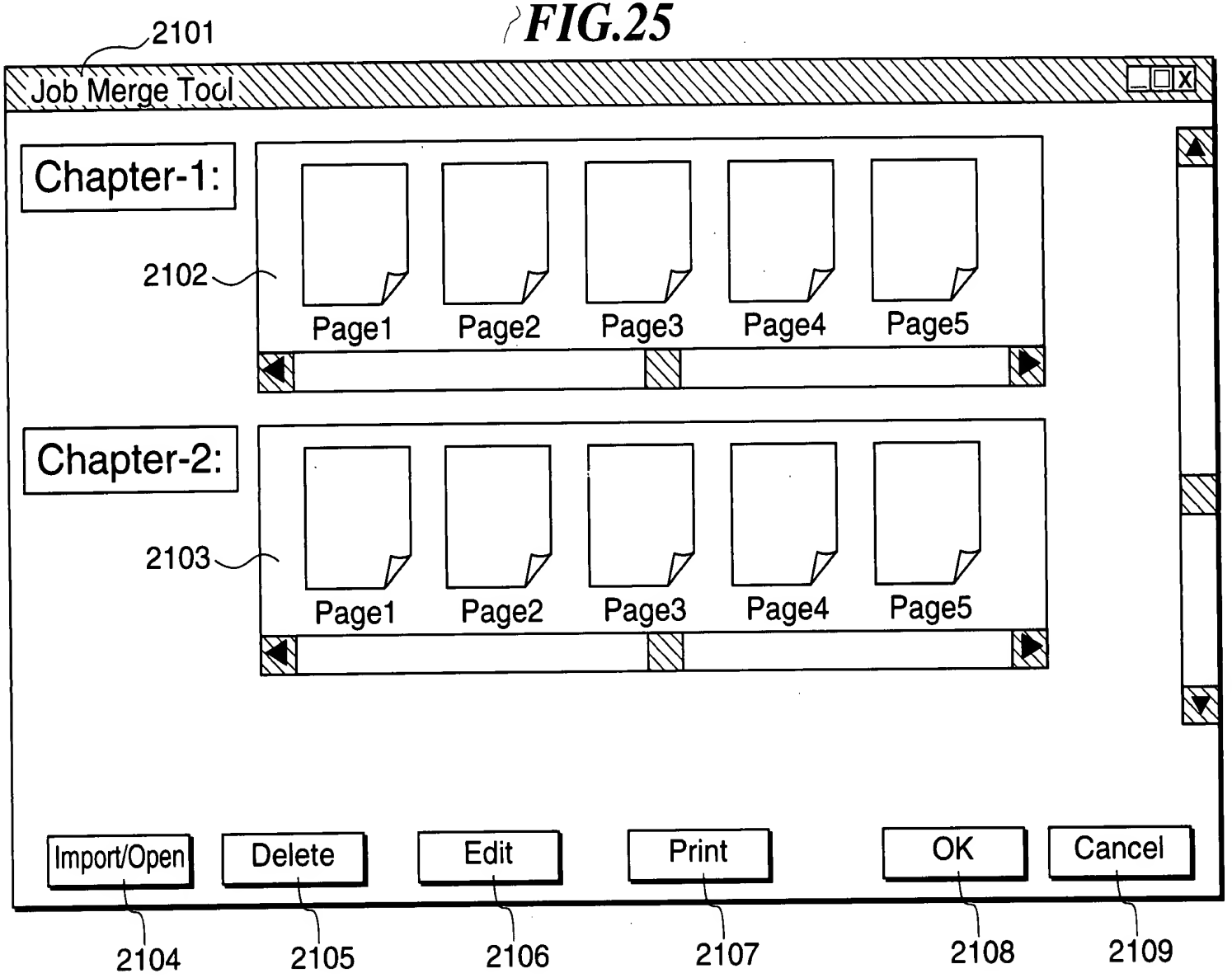

2101
Job Merge Tool
Chapter-1:
2102
Page1
Page2
Page3
Page4
Page5
Chapter-2:
2103
Page1
Page2
Page3
Page4
Page5
Import/Open
Delete
Edit
Print
OK
Cancel
2104
2105
2106
2107
2108
2109

FIG.26

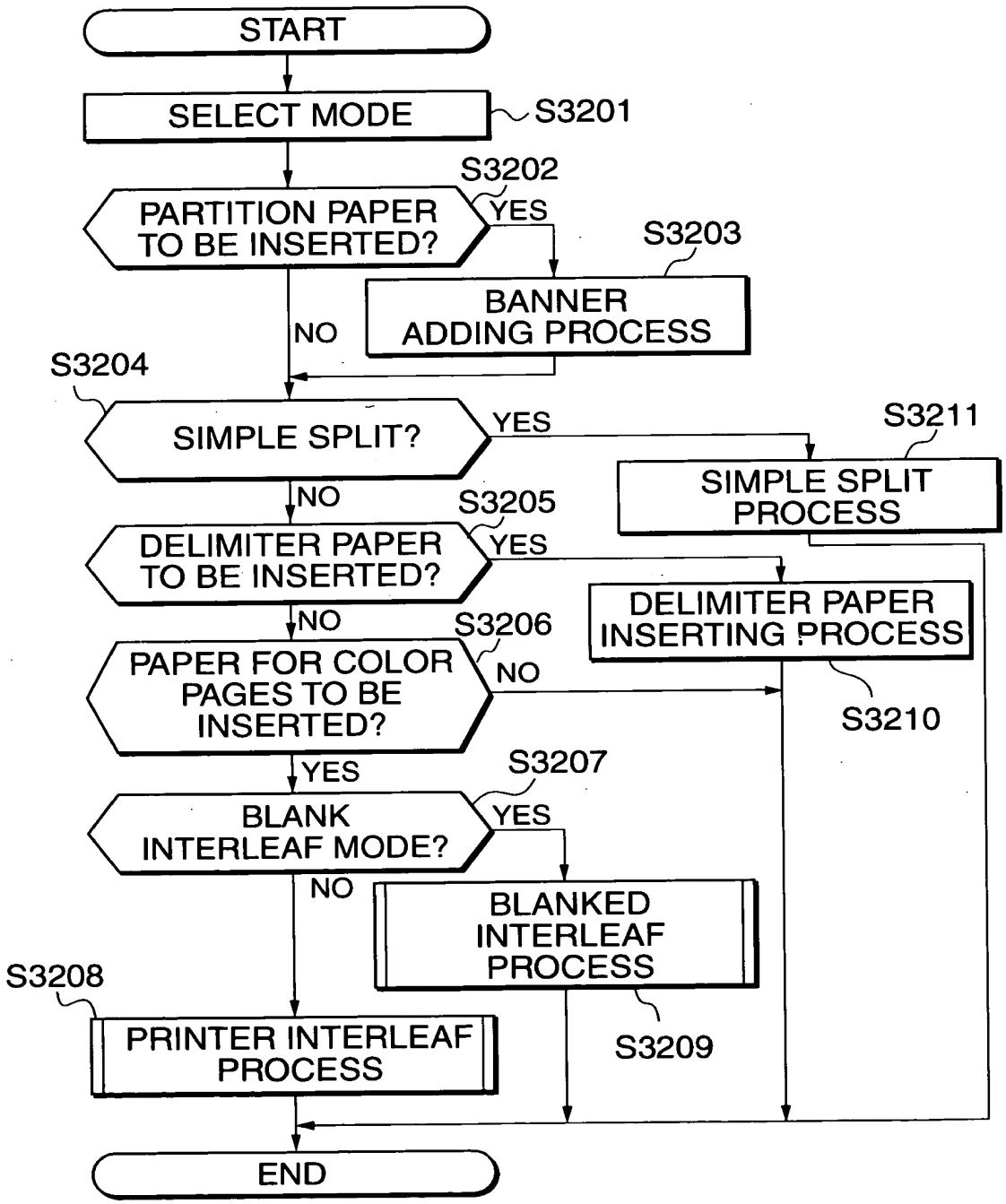
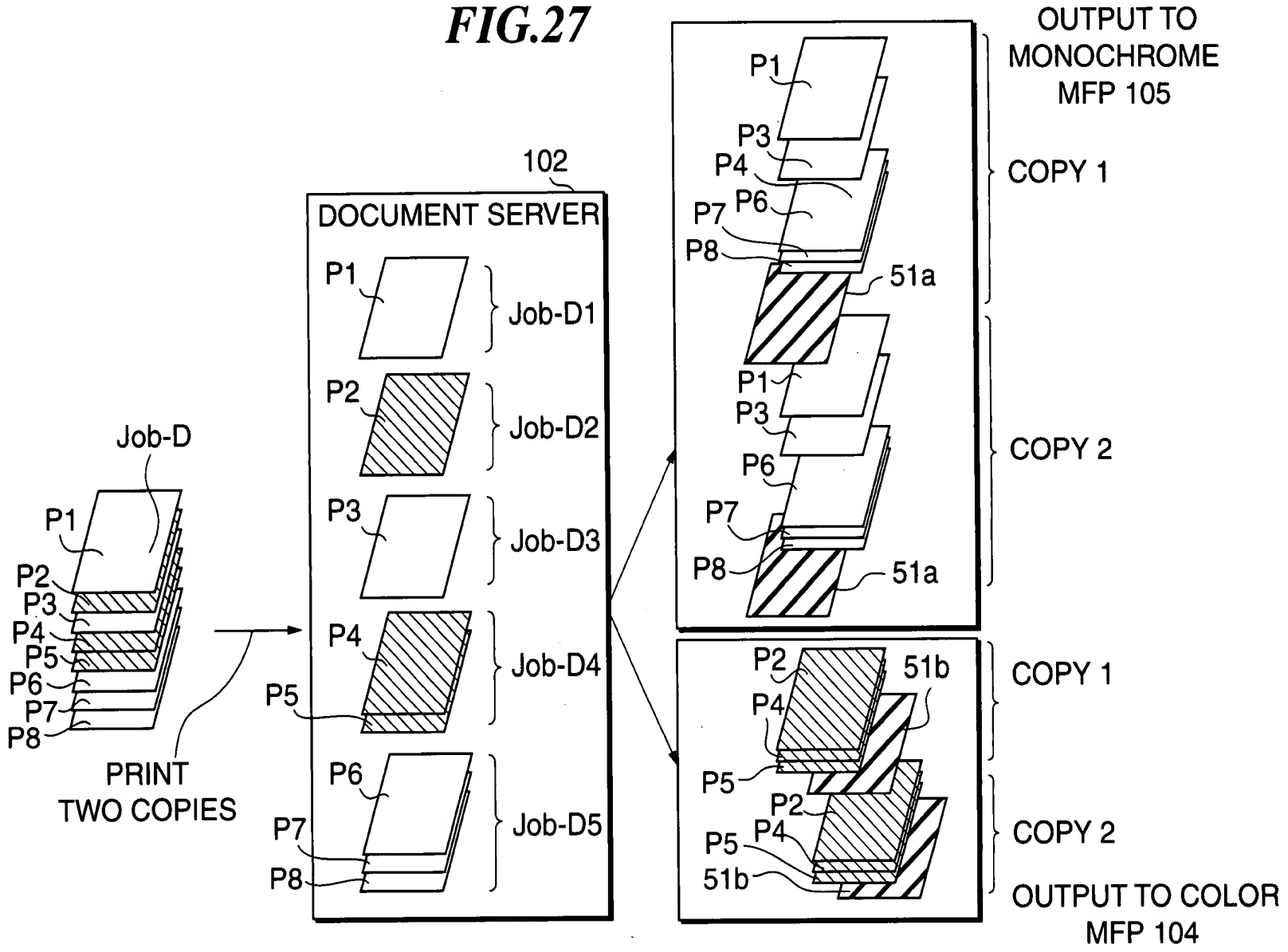

START
SELECT MODE
S3201
S3202
PARTITION PAPER TO BE INSERTED?
YES
S3203
BANNER ADDING PROCESS
NO
S3204
SIMPLE SPLIT?
YES
S3211
SIMPLE SPLIT PROCESS
NO
S3205
DELIMITER PAPER TO BE INSERTED?
YES
DELIMITER PAPER INSERTING PROCESS
NO
S3206
PAPER FOR COLOR PAGES TO BE INSERTED?
NO
S3210
YES
S3207
BLANK INTERLEAF MODE?
YES
NO
BLANKED INTERLEAF PROCESS
S3208
PRINTER INTERLEAF PROCESS
S3209
END

FIG.27


Job-D
P1
P2
P3
P4
P5
P6
P7
P8
PRINT
TWO COPIES
102
DOCUMENT SERVER
Job-D1
Job-D2
Job-D3
Job-D4
Job-D5
OUTPUT TO
MONOCHROME
MFP 105
COPY 1
COPY 2
51a
51b
OUTPUT TO COLOR
MFP 104

0020141-5505260

FIG.28

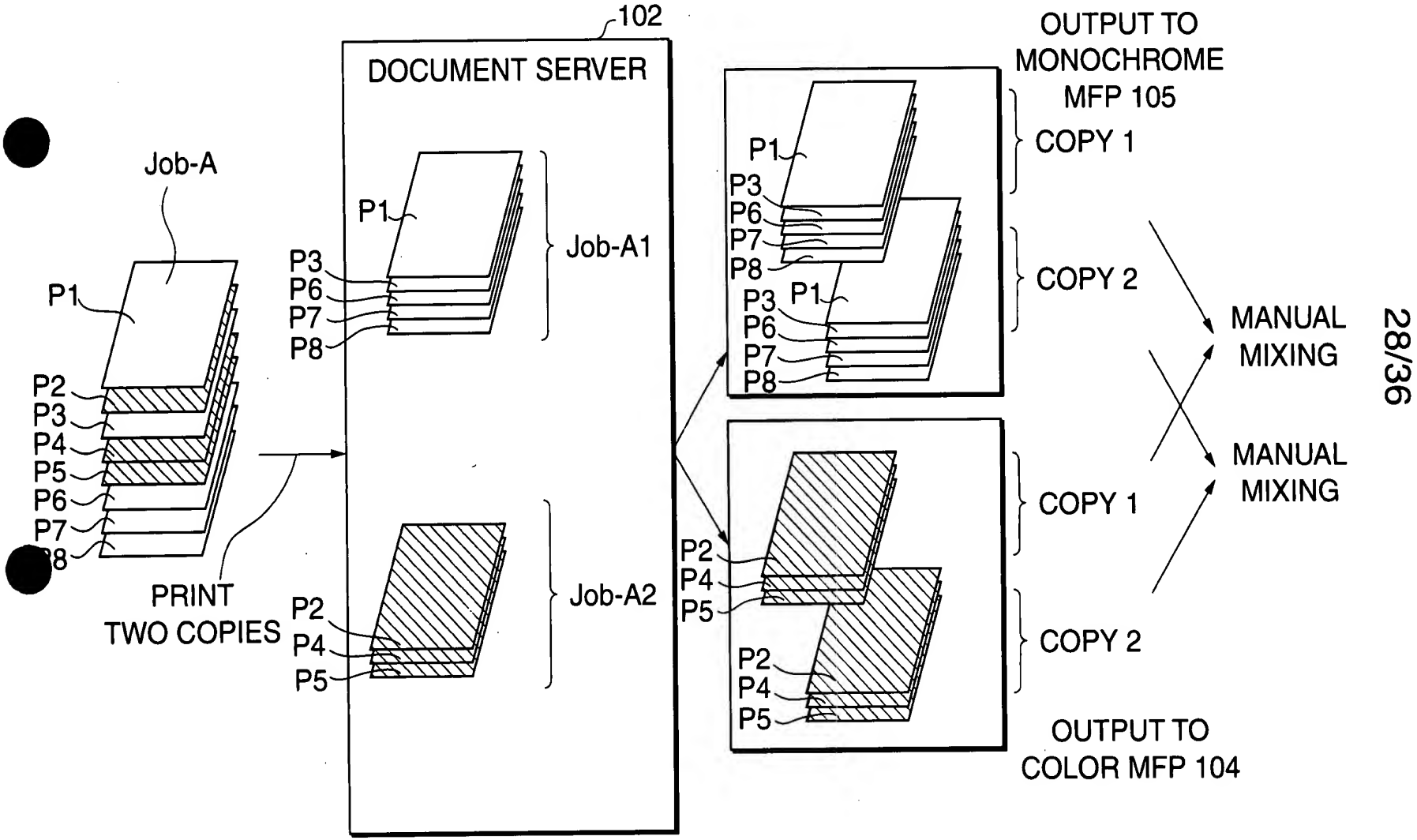


FIG.29

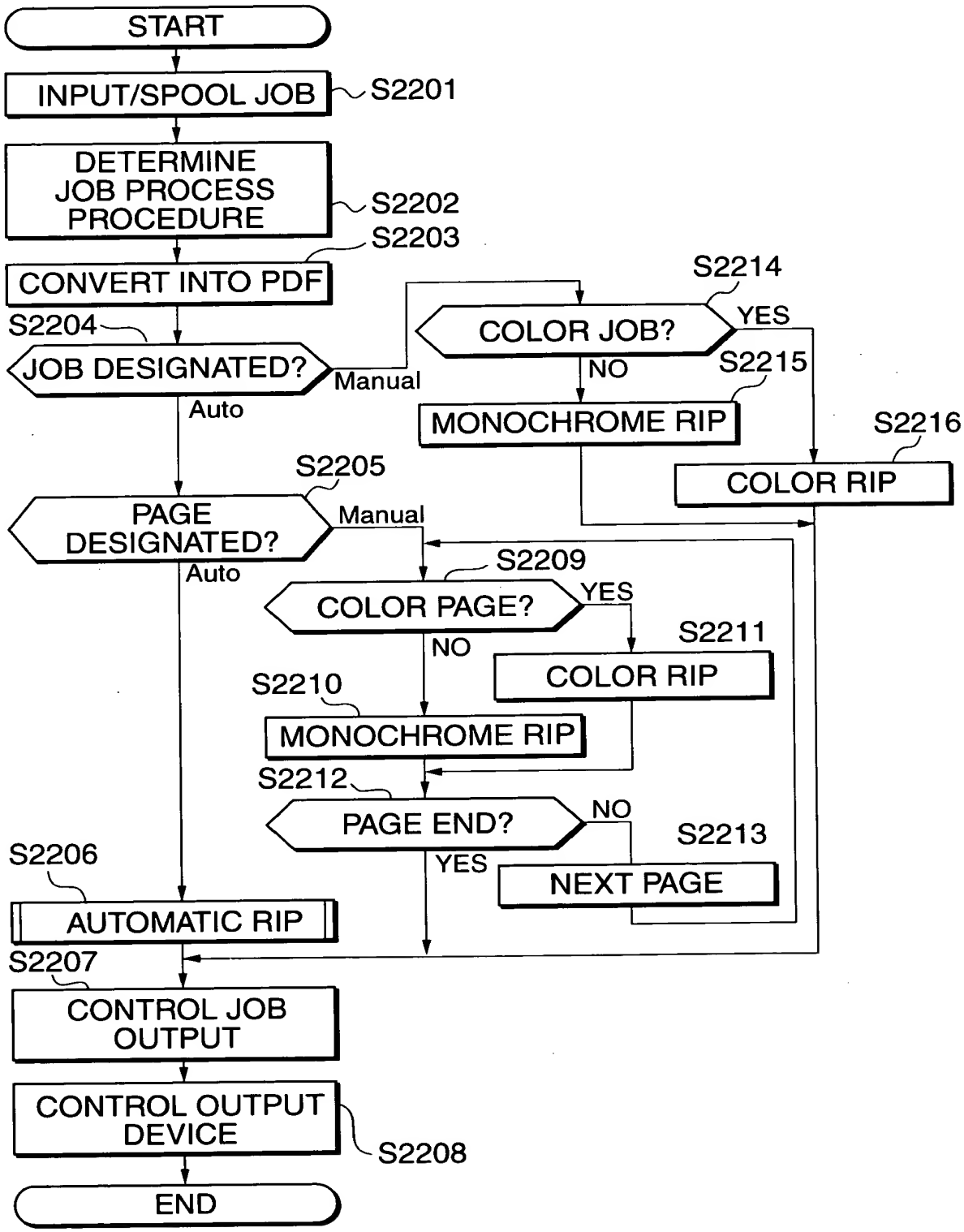

START
INPUT/SPOOL JOB
S2201
DETERMINE JOB PROCESS PROCEDURE
S2202
CONVERT INTO PDF
S2203
S2204
JOB DESIGNATED?
Manual
Auto
S2214
COLOR JOB?
YES
NO
S2215
MONOCHROME RIP
S2216
COLOR RIP
S2205
PAGE DESIGNATED?
Manual
Auto
S2209
COLOR PAGE?
YES
NO
S2211
COLOR RIP
S2210
MONOCHROME RIP
S2212
PAGE END?
NO
YES
S2213
NEXT PAGE
S2206
AUTOMATIC RIP
S2207
CONTROL JOB OUTPUT
CONTROL OUTPUT DEVICE
S2208
END

FIG.30

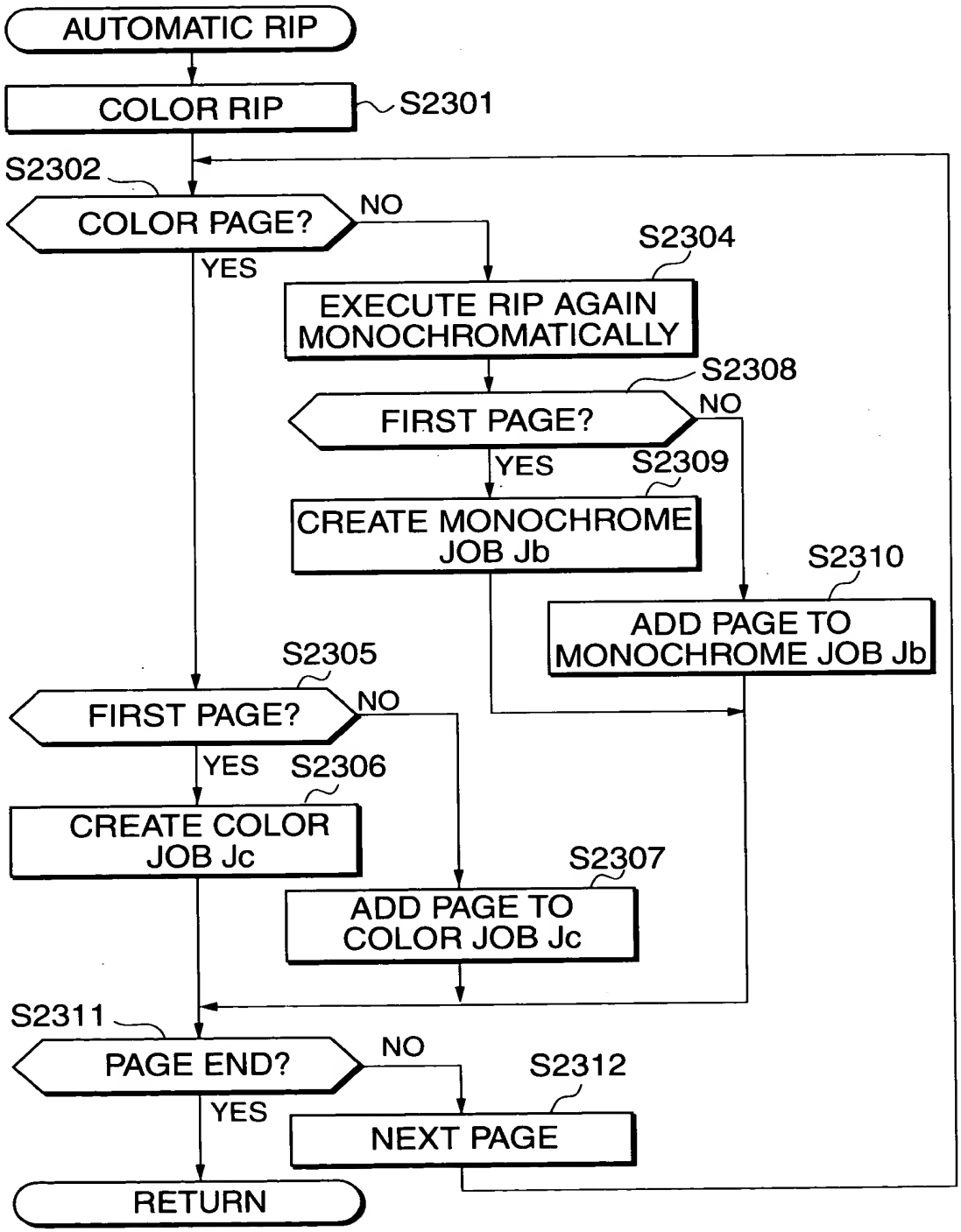

AUTOMATIC RIP
COLOR RIP
S2301
S2302
COLOR PAGE?
NO
YES
S2304
EXECUTE RIP AGAIN MONOCHROMATICALLY
S2308
FIRST PAGE?
NO
YES
S2309
CREATE MONOCHROME JOB Jb
S2310
ADD PAGE TO MONOCHROME JOB Jb
S2305
FIRST PAGE?
NO
YES
S2306
CREATE COLOR JOB Jc
S2307
ADD PAGE TO COLOR JOB Jc
S2311
PAGE END?
NO
YES
S2312
NEXT PAGE
RETURN

FIG.31

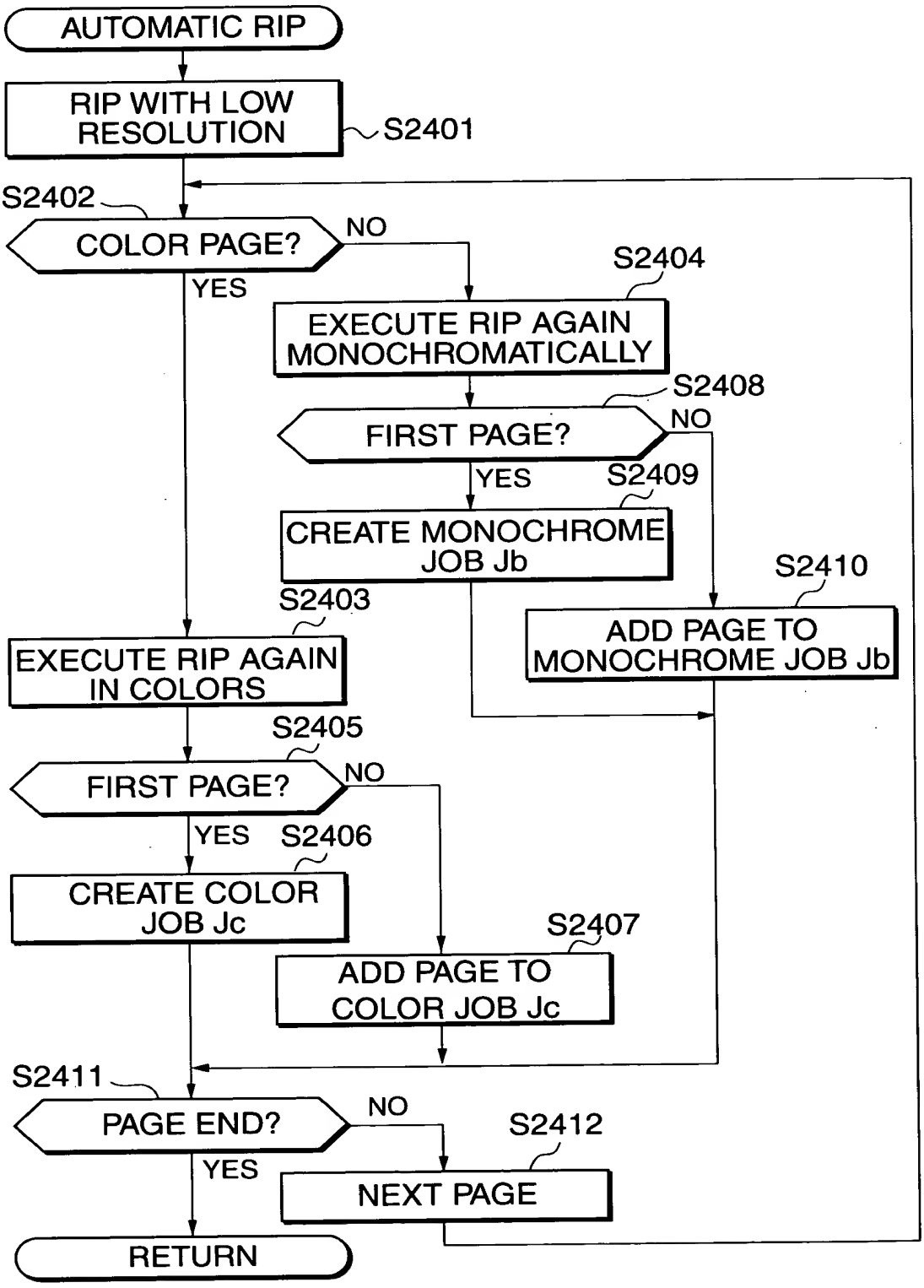

AUTOMATIC RIP
RIP WITH LOW RESOLUTION
S2401
S2402
COLOR PAGE?
NO
YES
S2404
EXECUTE RIP AGAIN MONOCHROMATICALLY
S2408
FIRST PAGE?
NO
YES
S2409
CREATE MONOCHROME JOB Jb
S2410
ADD PAGE TO MONOCHROME JOB Jb
S2403
EXECUTE RIP AGAIN IN COLORS
S2405
FIRST PAGE?
NO
YES
S2406
CREATE COLOR JOB Jc
S2407
ADD PAGE TO COLOR JOB Jc
S2411
PAGE END?
NO
YES
S2412
NEXT PAGE
RETURN

FIG.32

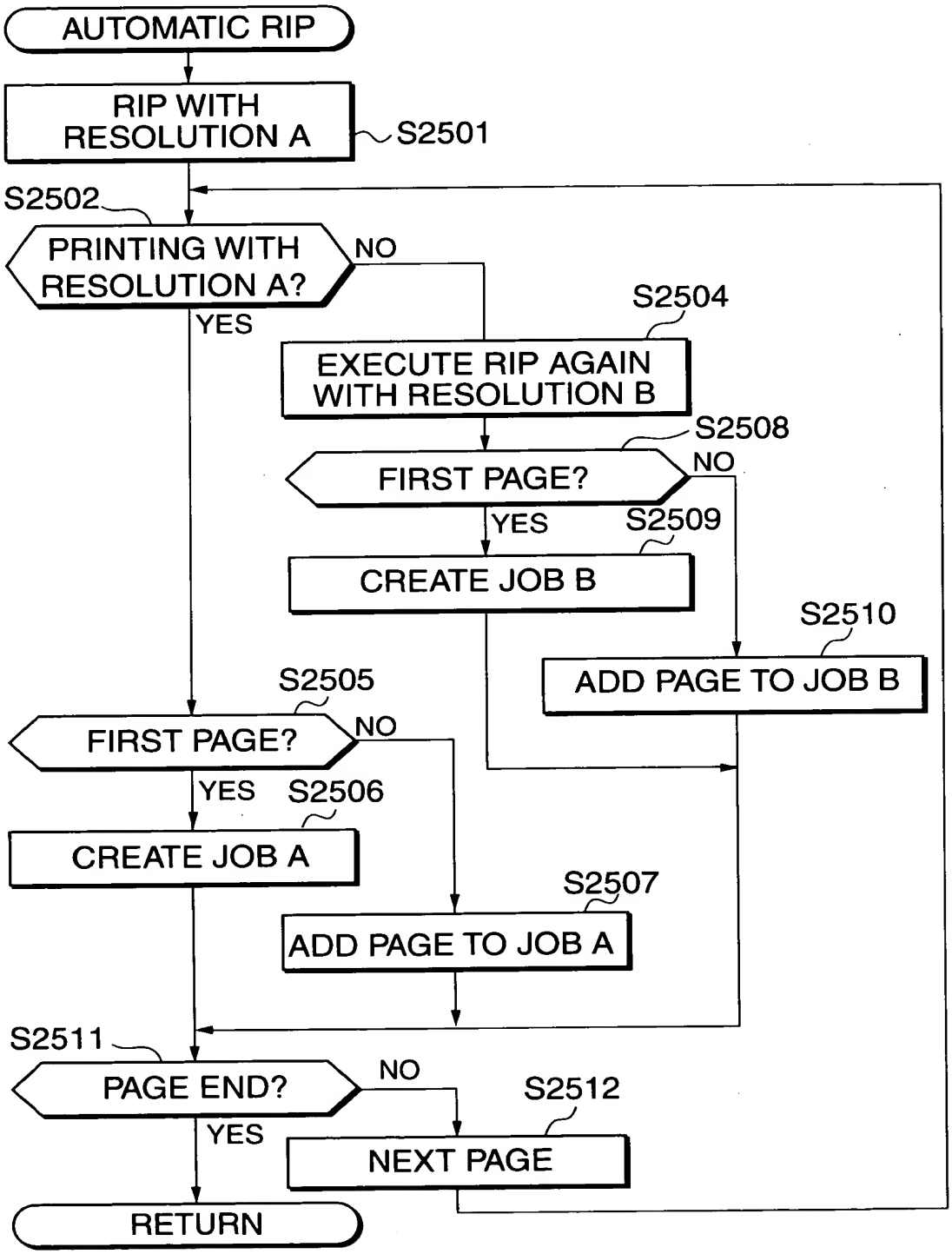

AUTOMATIC RIP
RIP WITH RESOLUTION A
S2501
S2502
PRINTING WITH RESOLUTION A?
NO
YES
S2504
EXECUTE RIP AGAIN WITH RESOLUTION B
S2508
FIRST PAGE?
NO
YES
S2509
CREATE JOB B
S2510
ADD PAGE TO JOB B
S2505
FIRST PAGE?
NO
YES
S2506
CREATE JOB A
S2507
ADD PAGE TO JOB A
S2511
PAGE END?
NO
YES
S2512
NEXT PAGE
RETURN

FIG.33

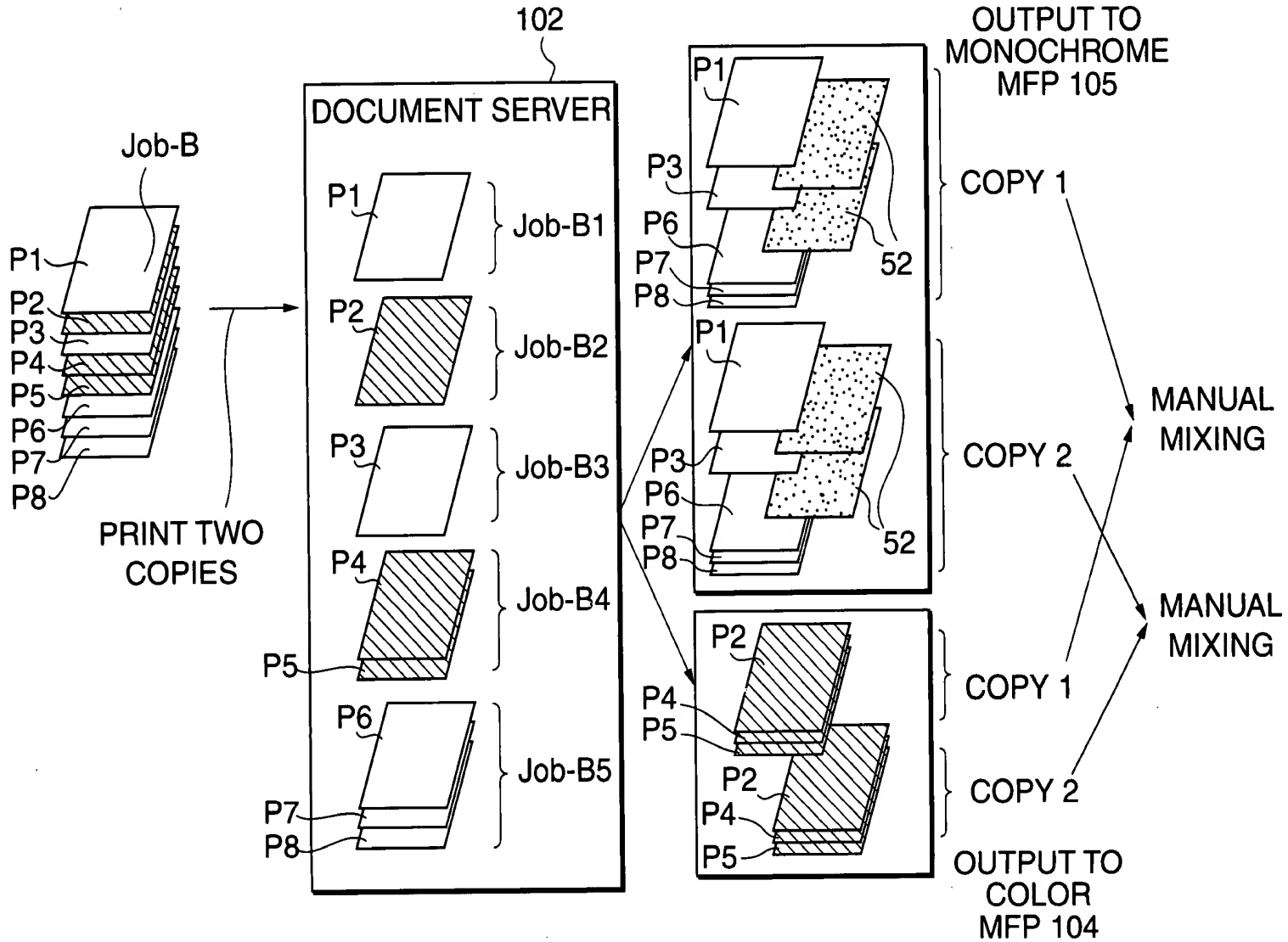

102
DOCUMENT SERVER
Job-B
P1
P2
P3
P4
P5
P6
P7
P8
PRINT TWO COPIES
Job-B1
Job-B2
Job-B3
Job-B4
Job-B5
OUTPUT TO MONOCHROME MFP 105
COPY 1
COPY 2
52
MANUAL MIXING
MANUAL MIXING
OUTPUT TO COLOR MFP 104

FIG.34

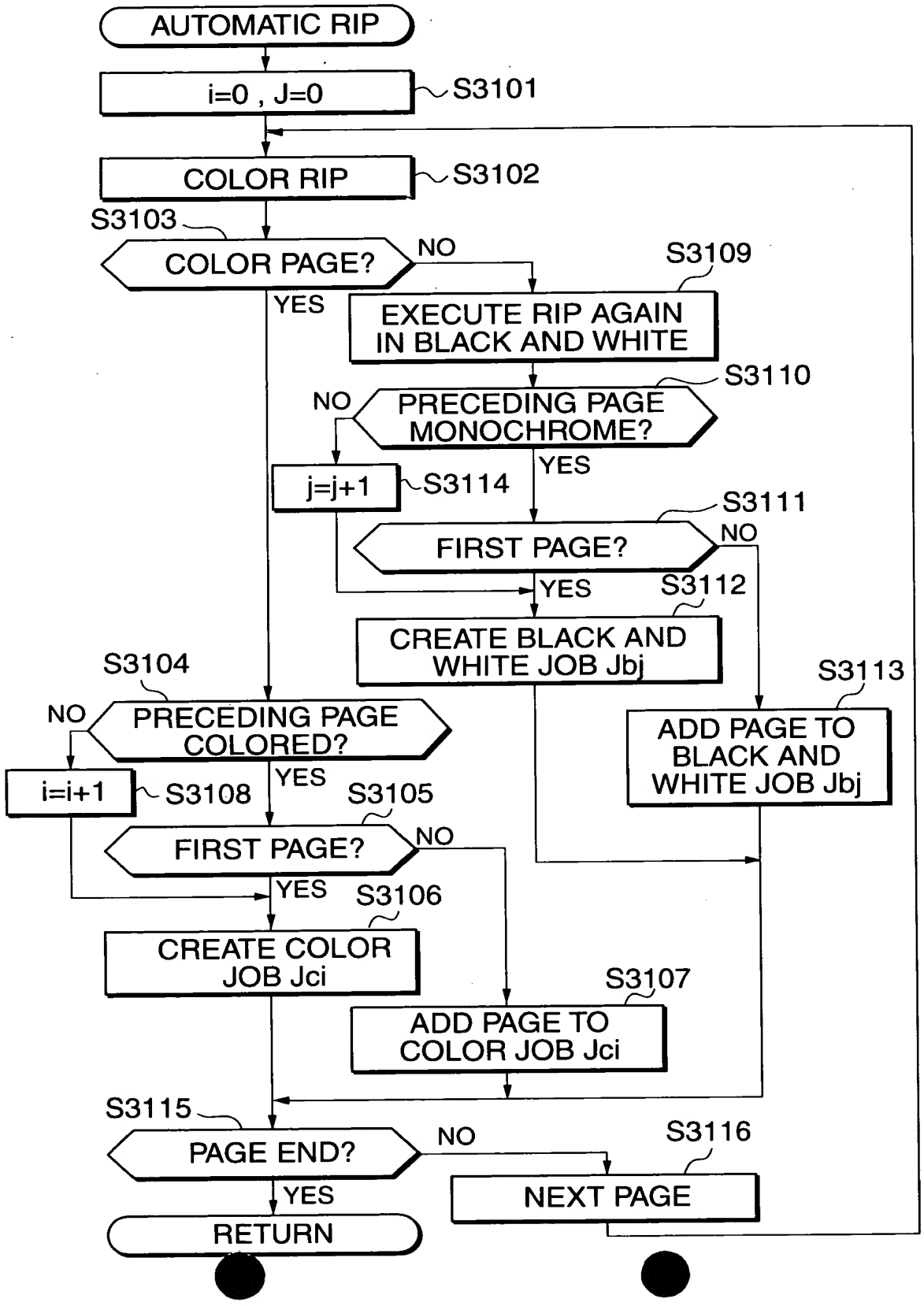

AUTOMATIC RIP
i=0 , J=0
S3101
COLOR RIP
S3102
S3103
COLOR PAGE?
NO
YES
S3109
EXECUTE RIP AGAIN IN BLACK AND WHITE
S3110
NO
PRECEDING PAGE MONOCHROME?
YES
j=j+1
S3114
S3111
FIRST PAGE?
NO
YES
S3112
CREATE BLACK AND WHITE JOB Jbj
S3104
NO
PRECEDING PAGE COLORED?
YES
S3113
ADD PAGE TO BLACK AND WHITE JOB Jbj
i=i+1
S3108
S3105
FIRST PAGE?
NO
YES
S3106
CREATE COLOR JOB Jci
S3107
ADD PAGE TO COLOR JOB Jci
S3115
PAGE END?
NO
YES
S3116
NEXT PAGE
RETURN

FIG.35

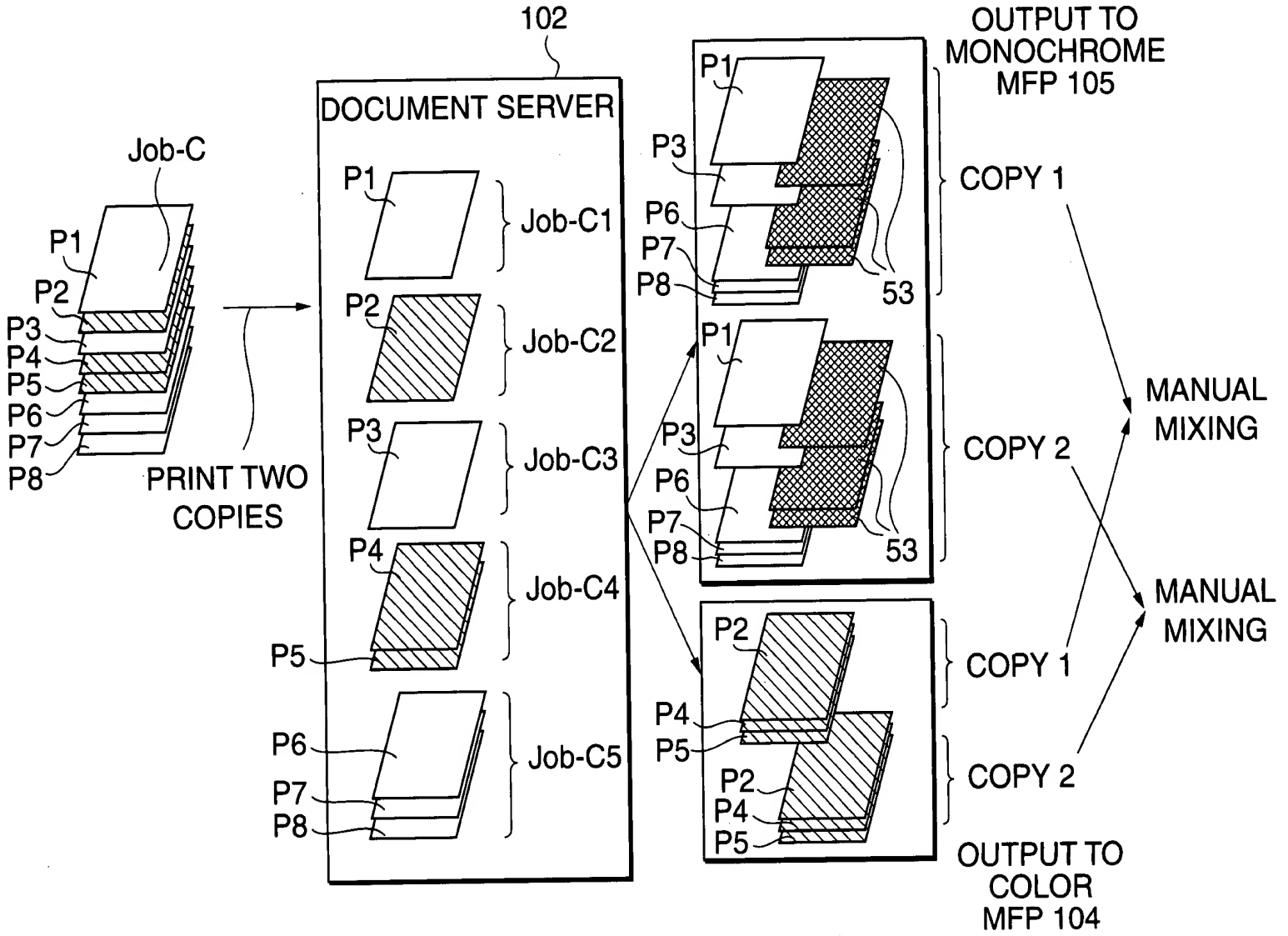
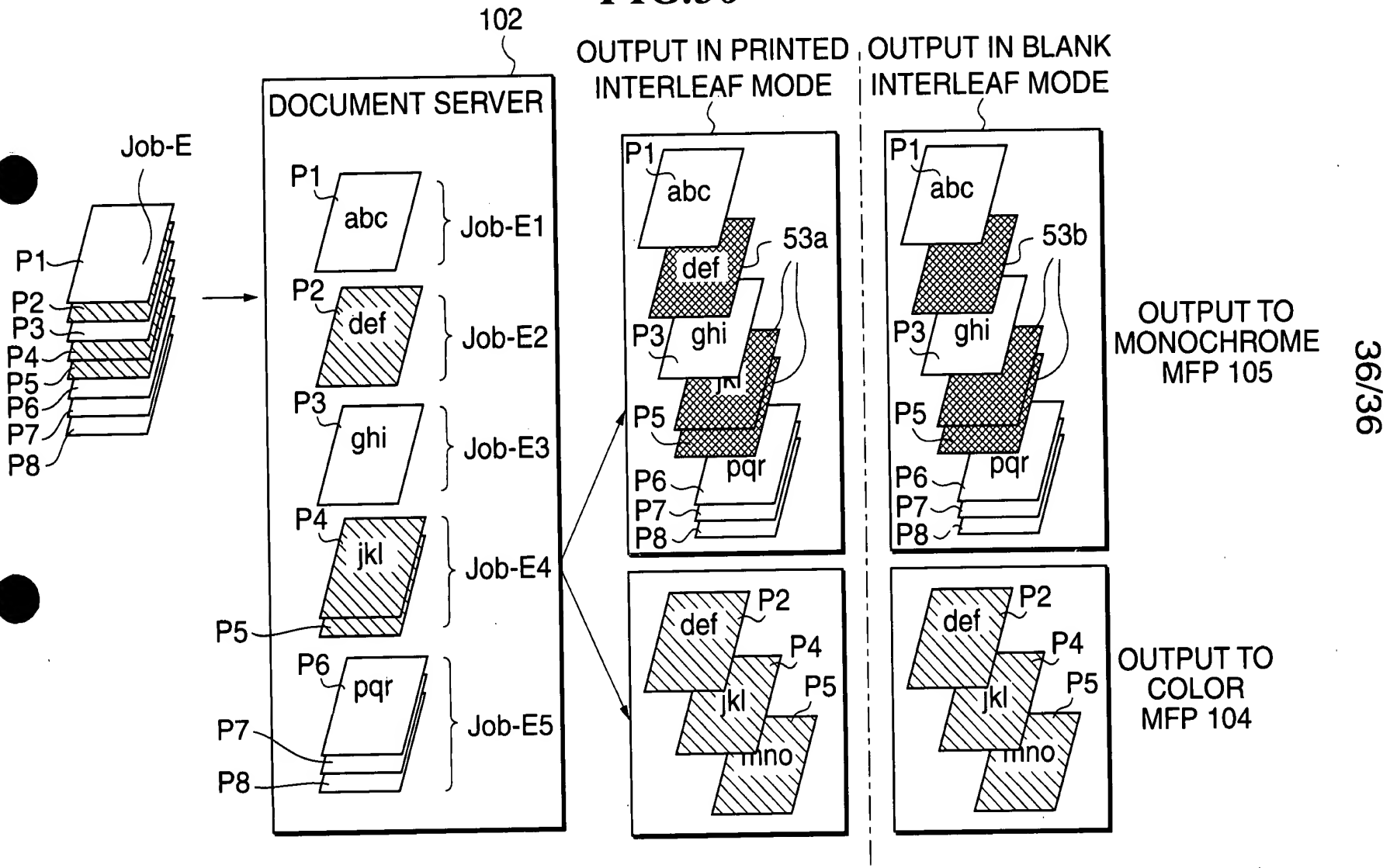

102
DOCUMENT SERVER
Job-C
P1
P2
P3
P4
P5
P6
P7
P8
PRINT TWO COPIES
Job-C1
Job-C2
Job-C3
Job-C4
Job-C5
OUTPUT TO MONOCHROME MFP 105
COPY 1
COPY 2
53
MANUAL MIXING
MANUAL MIXING
COPY 1
COPY 2
OUTPUT TO COLOR MFP 104

FIG.36


102
DOCUMENT SERVER
Job-E
P1
P2
P3
P4
P5
P6
P7
P8
abc
def
ghi
jkl
pqr
Job-E1
Job-E2
Job-E3
Job-E4
Job-E5
OUTPUT IN PRINTED INTERLEAF MODE
OUTPUT IN BLANK INTERLEAF MODE
53a
53b
mno
OUTPUT TO MONOCHROME MFP 105
OUTPUT TO COLOR MFP 104